

D. LESSELIER – 31/12/2023 - Dissémination académique (rapports de contrats & conventions exclus)
(pp. 1-2 Bref vitae (in English))

[Notice that the "HAL-generated list of publications" at L2S, for the years before 2003, only includes journal papers & book chapters. As for the personal webpage <http://webpages.lss.supelec.fr/perso/lesselier/>, it is updated as https://l2s.centralesupelec.fr/wp-content/uploads/lesselier-dominique/Lesselier_Dominique-Perso-Dec2022.html. Otherwise, <https://scholar.google.fr/citations?user=9y3AFmsAAAAJ&hl=frdata> provides some data on citations. One might refer also to <https://fr.linkedin.com/in/dominique-lesselier>. ORCID? 0000-0002-8378-2938.]

Born in Lons-le-Saunier (Jura, at that time within the region of Franche-Comté), France, on August 16, 1953, D. Lesselier studied there until his third year (*classe de quatrième*) of Collège (all at the Lycée Rouget-de-Lisle) before moving to Nice early summer of 1966. He pursued his studies there, at Lycée Masséna. He was awarded the *Baccalauréat C* in June 1970, and after following the so-called *Mathématiques Supérieures* and *Mathématiques Spéciales B* preparatory classes of Lycée Masséna, he entered as Grand-Admis into the Ecole Supérieure d'Electricité (a French *Grande Ecole*, then known as Supélec), Paris. He received the *Diplôme d'Ingénieur* from this Ecole in June 1975, and thereafter he was successively awarded the *Doctorat en Sciences* and the *Doctorat d'Etat es Sciences Physiques* degrees, in February 1978 and in March 1982, respectively, both by *Université Pierre et Marie Curie*, Paris (known then as Paris VI), both under the attentive direction of Professor Elie Roubine and in strong linkage with Professor Jean-Charles Bolomey—he also holds a *Maîtrise in Mathématiques et Applications Fondamentales* (mostly run as an academic, fruitful complement when student engineer), and a *Diplôme d'Etudes Approfondies* (DEA) in Optics and Photonics, the latter under Professor Serge Lowenthal, DEA that was a prerequisite for starting a Ph.D. at that time, both degrees awarded by Paris VI in June 1976.

He became Research Engineer at Supélec in October 1978, working and teaching on a broad range of electromagnetic and acoustic/elastic issues within Professor Jean-Charles Bolomey's team —his teaching mostly carried out under Professor Gérard Fournet—, and he was selected as *Chargé de recherche* (tenured junior scientist) by the *Centre National de la Recherche Scientifique* (CNRS) in October 1981, with a position within the *Laboratoire des Signaux et Systèmes*, acronymed as L2S, a joint laboratory of CNRS, Supélec, now having become CentraleSupélec, and Université Paris-Sud located in Gif-sur-Yvette, now within *Université Paris-Saclay*.

In L2S, he was with the *Département de Recherche en Electromagnétisme* since its creation, and he is now with the *Groupe Problèmes Inverses* of the *Pôle Signaux et Statistiques*. He was promoted as *Directeur de Recherche* (Director of research) at CNRS, *seconde classe* (known as DR2) in October 1988. He was advanced in October 2006 to the *première classe* (known as DR1), and from mid-October 2019 is *Directeur de Recherche CNRS Emérite* (Emeritus).

In //, among an array of teaching duties mostly in France and in Italy, MSc-like and Summer-Schools-like, he taught the course of Electromagnetics at the reputed DEA of *Université Paris-Diderot, Méthodes Physiques en Télédétection*, 10 years in a row from 1986. Aside, he even was a Corrector of the *Concours à Épreuves Communes* (École Centrale, SUPÉLEC, ...), Physique II, Option P', from May 1984 to May 1989.

Early on, he spent one year (1982-1983) as a Visiting Scholar within the Department of Electrical Engineering, the University of California at Los Angeles, at the invitation of/with/ Professor Cavour Yeh, in tight co-operation with Professor Akira Ishimaru, University of Washington, and he visited there a couple of months during several years afterward.

From January 2006 to December 2009, as Director of the *Groupement de Recherche* CNRS known as *GDR ONDES*, he has been managing a broad network of French laboratories and scientists involved in the science of waves (electromagnetics, acoustics, photonics) under many guises. He was very much involved in the creation of *GDR ONDES* in January 2002 as the main product of the 2001 *Groupe de réflexion thématique interdisciplinaire Ondes électromagnétiques et acoustiques* driven by Daniel Maystre and on which he was with Joe Wiart and Philippe Lalanne. Before his directorship, he oversaw Thematic Group 3 (with Manell Zakharia) devoted to imaging and inversion (this Group still exists nowadays). Afterward, he remained much involved in the many endeavors of the GDR, until his organization of its 8th (biennial) plenary conference in CentraleSupélec end of October 2019, then under Philippe Lalanne's directorship, <http://gdr-ondes.cnrs.fr>.

His main research activity nowadays pertains to developing solution methods of wave-field imaging and inverse problems, from sound mathematical theory to effective computational solutions (so-called

computational modeling) to pertinent applications, and vice-versa. Since the end of 1970's until now, he has authored/co-authored 146 journal papers, 11 invited book chapters, 75+ contributions to edited proceedings, and delivered (himself for most of them) 300+ conference papers under various guises, several more coming in 2023, and 55+ seminars either in French institutions yet, in effect, mostly abroad.

In addition to having been in charge of 24 Master-level internships, he has been advisor/co-advisor of 33 PhDs since 1986, that number including, counted this January 2023, 1 ongoing PhD, presently mostly (but not only) within the Doctoral School Sciences and Technologies of Information and Communication (STIC) of Université Paris-Saclay, before within the School Sciences and Technologies of Information, Telecommunications, and Systems (STITS), in charge/co-charge/ of 22 post-doctoral scientist positions during their work at L2S for up to three years each one —about half of the aforementioned Ph.D. and post-doc fellows (save those on their way) holds permanent positions at CNRS and higher-education French and foreign institutions, and the other half works in industrial R&D.

He has also been jury member (additionally half of the time referee or “rapporteur” of the manuscript) (+ with many president's duties) of 90+ Ph.D. defenses at a number of French as well as foreign universities, the latter in Newark, Gent, Leuven, Manchester, Trento, Singapore (NUS), and Tel Aviv, and 11 *Habilitations à Diriger des Recherches* (those in France), while he has carried out 400+ reviews of journal papers, stop counting now, plus an ever-growing number of reviews of conference papers.

Overall, he so far edited/co-edited/ 5 proceedings of international conferences, 2 collective books, and (no one achieved more in that journal ...) 4 special sections of the premier journal Inverse Problems since 2000 (those were with Tarek Habashy, 2000, John Bowler, 2002, Weng-Chow Chew, 2004, and Oliver Dorn, 2010), a 5th one just opened for 2023 with Oliver Dorn and Yu Zhong, and one volume of the Waves domain of the vast Sciences encyclopedia (Wiley-ISTE), on the Ground Probing Radar, is on its way this end of 2022, while with Radio Science he oversaw three invited reviews published, that work of editing was in 2011. As for the replete volume (English and French, Wiley-ISTE) on Non-Standard Antennas which he edited in 2010-2011 with François Le Chevalier (Thales) and Robert Staraj (LEAT) is worth reminding and still quite up-to-date

Otherwise, he has been and is acting within an array of industry-related projects as well as academic ones, both bilateral and multi-lateral ones, those often involving foreign (non-French) partners. The same holds true regarding his role as an expert on the behalf of a host of evaluation committees of regulating bodies, funding agencies, schools, and universities in France and several other countries in Europe and beyond. (Little of the related, quite replete information is input in the present short text¹.)

D. Lesselier received the R. W. P. King Award in October 1982 from the IEEE Antennas and Propagation Society. Fellow of the Institute of Physics (elected in 1999) and Fellow of the Electromagnetics Academy, Senior Member of the SEE (*Société de l'Electricité, de l'Electronique et des Technologies de l'Information et de la Communication*) as well as of the IEEE, he is also active since many years within the International Union of Radio Science, Commission B, whose he is a Senior Member.

Since 2003, per successively renewed terms of three years, until 2019, he has been Associate Editor of Radio Science (AGU). Between 2005 and 2016, he was belonging to the International Advisory Panel of Inverse Problems (IOP Science) after serving on its Editorial Board from 1997 to 2004 with “exceptional renewal for good service” in 2002. Since 2003, he is a Member of the Editorial Boards of the Journal of Electromagnetic Waves and Applications and of the PIER Progress in Electromagnetic Research.

Also, since 1998, he belongs to the Standing Committee of the Electromagnetic Non-Destructive Evaluation Workshop Series (ENDE) and to the International Steering Committee of the International Symposia on Applied Electromagnetics and Mechanics (ISEM), from which he received the ISEM Chairpersonship Award in 2005, whilst he has been actively engaged into the organization of very many international conferences throughout the world, beyond those two specialized series, including many special sessions and the like, and obviously chairing a number of scientific events, with strong international flavor for most of them, one recent example being ENDE 2017 in Saclay, in September 2017, which he and Christophe Reboud at LIST CEATech, co-organized, chaired and edited, with in particular the backing of DIGITEO. To underline his involvement in NdT at large in France, he is a Member of the COFREND *Comité Scientifique Permanent* since 2015.

¹ Two still well-illustrative co-operative works in the French scientific community among others led/co-led: the *Action Spécifique AS 58, RTP 26, Instruments et Systèmes d'Ondes, Département STIC CNRS, Contrôle Non-Destructif – Intégration Multi-Capteur*, with Claire Prada (2002-03); the *Groupe de Réflexion Thématische Num@tec - Pôle Ile-de-France, Interactions ondes/matières, structures et systèmes, capteurs, actionneurs et métrologie*, with Yasser Alayli (2003-04).

Thèses

- [T1] Etude temporelle de la propagation du champ électromagnétique dans les lames inhomogènes dispersives. Application au diagnostic.
Thèse de Doctorat de 3ème Cycle, soutenue devant M. Françon (Président), E. Roubine, J. Cea et J.-C. Bolomey, fév. 1978.
- [T2] Diagnostic optimal de la lame inhomogène en régime temporel. Application à l'électromagnétisme et à l'acoustique.
Thèse de Doctorat d'Etat ès Sciences Physiques, soutenue devant E. Roubine (Président), J. Cea, H. Blok et W. Tabbara (Rapporteurs), Y. Leroy et J.-C. Bolomey (Examinateurs), mars 1982.

Publications dans des revues spécialisées avec comité de lecture

- [A1] Générateur d'impulsions pour un banc automatique de réflectométrie.
D. Brunol, C. Durix, D. Lesselier, F. Pupat
Onde Electrique **57**(12), 761-765, déc. 1977.
- [A2] Time domain integral equation approach for inhomogeneous and dispersive slab problems.
J.-C. Bolomey, C. Durix, D. Lesselier
IEEE Transactions on Antennas and Propagation **AP-26**(5), 658-667, sept. 1978.
- [A3] Determination of index profiles by time-domain reflectometry.
D. Lesselier
Journal of Optics (Paris) **9**(6), 349-358, déc. 1978.
- [A4] Determination of conductivity profiles by time domain reflectometry.
J.-C. Bolomey, C. Durix, D. Lesselier
IEEE Transactions on Antennas and Propagation **AP-27**(2), 244-248, mars 1979.
- [A5] Etude numérique des antennes épaisses par l'équation intégrale d'Albert et Synge.
J.-C. Bolomey, F. Hillaire, D. Lesselier
Annales des Télécommunications **35**(5-6), 183-192, mai-juin 1980.
- [A6] Spectral and time domain approach to some inverse scattering problems.
J.-C. Bolomey, D. Lesselier, C. Pichot, W. Tabbara
Article invité, IEEE Transactions on Antennas and Propagation, Special Issue on Inverse Problems
AP-29(2), 206-212, mars 1981.
- [A7] Conical antennas as coupling structures for microwaves and infrared devices.
J.-C. Bolomey, J. Cashman, S. El Habiby, D. Lesselier
International Journal on Infrared and Millimeter Waves **2**, 4, 859-877, juil. 1981.
- [A8] Optimization theory and time-domain inverse scattering.
D. Lesselier
Radio Science **16**, 6, 1059-1063, nov.-déc. 1981.
- [A9] Diagnostic de milieux inhomogènes unidimensionnels par échographie électromagnétique.
D. Lesselier
Revue du CETHEDEC **68**, 1-42, 3ème trim. 1981.
- [A10] Optimization techniques and inverse problems: reconstruction of conductivity profiles in the time-domain.
D. Lesselier
Article primé (1982 Ronold W. P. KING Award), *IEEE Transactions on Antennas and Propagation*
AP-30, 1, 59-65, janv. 1982.

- [A11] Practical problems in the time domain probing of lossy dielectric media.
J.-C. Bolomey, D. Lesselier, G. Peronnet
IEEE Transactions on Antennas and Propagation AP-30(5), 993-998, sept. 1982.
- [A12] Optimization techniques and inverse problems: probing of acoustic impedance profiles in time domain.
D. Lesselier
Journal of the Acoustical Society of America 72(4), 1276-1284, oct. 1982.
- [A13] Physically motivated approximations in some inverse scattering problems.
J.-C. Bolomey, D. Lesselier, C. Pichot, W. Tabbara
Article invité, *Radio Science 17(6)*, 1567-1578, nov.-déc. 1982.
- [A14] P-wave transient scattering by 2-D penetrable targets: a direct solution.
D. Lesselier
Journal of the Acoustical Society of America 74(4), 1274-1278, oct. 1983.
- [A15] Détermination de la permittivité et de la conductivité d'un milieu stratifié à l'aide d'un dipôle enterré.
F. Falchetti, D. Lesselier, W. Tabbara
Revue du CETHEDEC 76, 27-33, 3^e trim. 1983.
- [A16] Multiple scattering calculations for non-spherical particles based on the vector radiative transfer theory.
A. Ishimaru, D. Lesselier, C. Yeh
Radio Science 19(5), 1356-1366, sept-oct. 1984.
- [A17] First-order multiple scattering theory for nonspherical particles.
A. Ishimaru, C. Yeh, D. Lesselier
Applied Optics 23, 22, 4132-4139, 15 nov. 1984.
- [A18] Probing of a stratified medium by means of a magnetic dipole: a geometrical optics approach.
F. Falchetti, D. Lesselier, W. Tabbara
IEEE Transactions on Geoscience and Remote Sensing GRS-23(6), 819-826, nov. 1985.
- [A19] Diffraction tomography approach to acoustical imaging and media characterization.
B. Duchêne, D. Lesselier, W. Tabbara
Journal of the Optical Society of America A, Feature Issue: Inverse Problems in Propagation and Scattering 2(11), 1943-1953, nov. 1985.
- [A20] Contribution à l'imagerie ultrasonore quantitative.
B. Duchêne, D. Lesselier, W. Tabbara
Traitemen du Signal 2, 5 Sp., 473-477, 4ème trim. 1985.
- [A21] Iterative solution of some direct and inverse problems in electromagnetics and acoustics.
D. Lesselier, D. Vuillet-Laurent, F. Jouvie, W. Tabbara
Article invité, *Electromagnetics, Special Double Issue on Iterative Methods in Electromagnetics 5(2-3)*, 147-189, 1985.
- [A22] Acoustical imaging of 2-D fluid targets buried in a half-space: a diffraction tomography approach.
B. Duchêne, D. Lesselier, W. Tabbara
IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control UFFC-34(5), 540-549, sept. 1987.
- [A23] Diffraction tomography: contribution to the analysis of some applications in microwaves and ultrasonics.
W. Tabbara, B. Duchêne, C. Pichot, D. Lesselier, L. Chommeloux, N. Joachimowicz

Article invité, Inverse Problems **4**(2), 305-331, mai 1988.

Cet article a été celui choisi comme le représentant de l'année 1988 du Journal au titre de son 25ème anniversaire, cet été 2010, comme cité : "25th Year Anniversary Collection : To celebrate the last 25 years of high-quality, thought provoking research articles published in Inverse Problems, we have compiled a special collection of papers. The 25th Anniversary Collection is representative of the exceptional effort made by all of our authors and referees over the past 25 years and comprises an outstanding paper from each year of publication."

- [A24] Experimental investigation of a diffraction tomography technique in fluid ultrasonics.
B. Duchêne, D. Lesselier, W. Tabbara
IEEE Transactions on Ultrasonics, Ferroelectrics and Frequency Control **UFFC-35**(4), 437-444, juil. 1988.
- [A25] Problèmes unidimensionnels de diffraction inverse en acoustique et électromagnétisme. Etude bibliographique.
D. Lesselier, W. Tabbara
Journal d'Acoustique **1**, 363-384, déc. 1988.
- [A26] Dipole approximations applied to the inverse problem in boreholes. A numerical study.
H. Galan-Malaga, D. Lesselier, W. Tabbara
Article invité, Wave Motion, Special Issue on Inverse Methods, **11**, 137-150, mai 1989.
- [A27] Analyse de quelques approximations utiles à la caractérisation acoustique du fond marin.
P. Grassin, R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
Journal d'Acoustique **2**, 241-254, sept. 1989.
- [A28] Eddy current testing of anomalies in conductive materials. Part I: qualitative imaging via diffraction tomography techniques.
R. Zorgati, B. Duchêne, D. Lesselier, F. Pons
IEEE Transactions on Magnetics **MAG-27**(6), 4416-4437, nov. 1991.
- [A29] Eddy current testing of anomalies in conductive materials. Part II: quantitative imaging via generalized inverse techniques.
R. Zorgati, D. Lesselier, B. Duchêne, F. Pons
IEEE Transactions on Magnetics **MAG-28**(3), 1850-1862, mai 1992.
- [A30] A diffraction tomographic algorithm for eddy current imaging from anomalous fields at fictitious imaginary frequencies.
R. de Oliveira Bohbot, D. Lesselier, B. Duchêne
Inverse Problems **10**(1), 109-127, fév. 1994.
- [A31] On inverse source method of solving inverse scattering problems.
W. C. Chew, Y. M. Wang, G. Otto, D. Lesselier, J.-C. Bolomey
Inverse Problems **10**(3), 547-553, juin 1994.
- [A32] On the retrieval of the plane wave reflection coefficient of a seabed in shallow water.
M. Lambert, D. Lesselier
Acta Acustica **3**, 243-249, juin 1995.
- [A33] Born-type schemes for the acoustic probing of 1-D fluid media from time-harmonic planar reflection coefficients at two incidences.
M. Lambert, R. de Oliveira Bohbot, D. Lesselier
Journal of the Acoustical Society of America **95**(1), 243-253, janv. 1996.

- [A34] Inversion of a cylindrical vibrating body in shallow water from aspect-limited data using filtered SVD and the L-curve.
C. Rozier, D. Lesselier,
ACUSTICA Acustica united with Acta Acustica **82**(5), 717-728, sept.-oct. 1996.
- [A35] Mapping voids in a conductive half-space by simulated annealing with connectivity and size as constraints.
R. de Oliveira Bohbot, D. Lesselier, B. Duchêne
Journal of Electromagnetic Waves and Applications **10**(7), 983-1004, juil. 1996.
- [A36] Modified gradient approach to inverse scattering for binary objects in stratified media.
L. Souriau, B. Duchêne, D. Lesselier, R. E. Kleinman
Inverse Problems **12**(4), 463-481, août 1996.
- [A37] Shape retrieval of a cylindrical obstacle immersed in shallow water from single-frequency farfields using a complete family method.
C. Rozier et D. Lesselier, T. S. Angell et R. E. Kleinman
Inverse Problems **13**(2), 487-508, avril 1997.
- [A38] Evaluation of a 3-D bounded defect in the wall of a metal tube at eddy current frequencies: the direct problem.
V. Monebhurrun, D. Lesselier, B. Duchêne
Journal of Electromagnetic Waves and Applications **12**(3), 315-347, mars 1998.
- [A39] Reconstruction of a 2-D binary obstacle by controlled evolution of a level set.
A. Litman, D. Lesselier, F. Santosa
Inverse Problems **14**(3), 685-706, juin 1998 (et *Preprint Series IMA* # 1531, fév. 1998)
- [A40] 3-D inversion of eddy current data for non-destructive evaluation of steam generator tubes.
V. Monebhurrun, B. Duchêne, D. Lesselier
Inverse Problems **14**(3), 707-724, juin 1998.
- [A41] The retrieval of a buried cylindrical obstacle by a constrained modified gradient method in the H-polarization case and for Maxwellian materials.
M. Lambert, D. Lesselier, B. J. Kooij
Inverse Problems **14**(5), 1265-1283, oct. 1998.

Featured article (avait été sélectionné pour présentation et libre accès en 1998-1999, Journal Information Page for Inverse Problems, du site WWW de l'Institute of Physics)

- [A42] On attenuation-matched inversion methods of diffusive wavefields.
A. Litman, D. Lesselier
Article invité, Inverse Problems, Special Issue Article PICOF'98 **15**, 99-111, fév. 1999.
- [A43] Nonlinear inversion of a buried object in transverse electric scattering.
B. J. Kooij, M. Lambert, D. Lesselier
Radio Science **34**(6), 1361-1371, nov.-déc. 1999
- [A44] Electromagnetic scattering by a triaxial homogeneous penetrable ellipsoid: low-frequency derivation and testing of the localized nonlinear approximation.
G. Perrusson, M. Lambert et D. Lesselier, A. Charalambopoulos et G. Dassios
Présélectionné, Radio Science **35**(2), 463-481, mars-avril 2000.
- [A45] Distributed source method for retrieval of the cross-sectional contour of an impenetrable cylindrical object in a shallow water waveguide.
M. Lambert, D. Lesselier,

ACUSTICA Acustica united with Acta Acustica **86**(1), 15-24, janv.-fév. 2000.

- [A46] Binary-constrained inversion of a buried cylindrical obstacle from complete and phaseless magnetic fields.
M. Lambert, D. Lesselier
Inverse Problems **16**(3), 563-576, juin 2000.
- [A47] Conductive masses in a half-space Earth in the diffusive regime: Fast hybrid modeling of a low-contrast ellipsoid.
G. Perrusson, D. Lesselier et M. Lambert, B. Bourgeois, A. Charalambopoulos et G. Dassios
Pré-sélectionné, *IEEE Transactions on Geoscience and Remote Sensing (Special Issue on Computational Wave Issues in Remote Sensing, Imaging and Target Identification, Propagation and Inverse Scattering)* **38**(4), 1585-1599, juil. 2000.
- [A48] High-Tc SQUIDs and eddy-current NDE: a comprehensive investigation from real data to modeling.
A. Ruosi, M. Valentino et G. Pepe, V. Monebhurrun, D. Lesselier et B. Duchêne
Measurement Science and Technology **11**(11), 1639-1648, nov. 2000.
- [A49] Shape reconstruction by controlled evolution of a level set: from a min-max formulation to numerical experimentation.
C. Ramananjaona, M. Lambert et D. Lesselier, J.-P. Zolésio
Inverse Problems, Special Issue dedicated to P. C. Sabatier on his 65th birthday **17**, 4, 1087-1111, août 2001. Corrigendum (pb. d'impression de figures) **17**, 2017-2022, 2001.
- [A50] Shape inversion from TM and TE real data by controlled evolution of level sets.
C. Ramananjaona, M. Lambert, D. Lesselier
Inverse Problems, Special Section on Inversion from Real Data **17**, 6, 1585-1595, déc. 2001. Corrigendum (pb. d'impression de figures) **18**, 279-282, 2002.
- [A51] A novel approach to the low-frequency scattering problem: the localized nonlinear approximation in ellipsoidal geometry.
A. Charalambopoulos et G. Dassios, G. Perrusson et D. Lesselier
International Journal of Engineering Science **40**(1), 67-91, janv. 2002.
- [A52] Extended Born domain integral models of diffusive fields.
D. Dos Reis, M. Lambert, D. Lesselier
IEEE Transactions on Magnetics **MAG-38**(2), 577-580, mars 2002.
- [A53] On the modeling and inversion of 3-D inclusions in conductive media using extended Born models in the diffusive regime.
D. Dos Reis, M. Lambert, D. Lesselier
International Journal of Applied Electromagnetics and Mechanics **14**(1-4), 477-481, 2001-2002.
- [A54] On novel developments of the controlled evolution of level sets in the field of inverse shape problems.
C. Ramananjaona, M. Lambert, D. Lesselier, J.-P. Zolésio
Présélectionné, *Radio Science*, 13 déc. 2002 [*in print* **38**, 2, VIC 11-1-VIC 11-9].
- [A55] Eddy-current evaluation of three-dimensional defects in a metal plate.
D. Dos Reis, M. Lambert, D. Lesselier
Inverse Problems, Special Section on Electromagnetic and Ultrasonic Nondestructive Evaluation **18**(6), 1857-1871, déc. 2002.
- [A56] On a dyadic-based approach of the three-dimensional electromagnetic field in a conductive cylinder at eddy-current frequencies.
G. Micolau, G. Pichenot, D. Premel, D. Lesselier, M. Lambert
IEEE Transactions on Magnetics **40**(2), 400-409, mars 2004.

- [A57] Modélisation de sonde courants de Foucault avec noyau ferromagnétique.
F. Buvat, G. Pichenot, D. Lesselier, M. Lambert, H. Voillaume
Contribution sollicitée, Instrumentation, Mesure et Métrologie, numéro spécial « Contrôle non destructif électromagnétique en aéronautique » **4**(1), 63-82, juin 2004.
- [A58] Low-frequency solution for a perfectly conducting sphere in a conductive medium with dipolar excitation.
P. Vafeas, G. Perrusson, D. Lesselier
Journal of Electromagnetic Waves and Applications, et Book PIER Series **49**, 87-111, 2004.
- [A59] Adaptive multiscale reconstruction of buried objects.
A. Baussard, E. L. Miller, D. Lesselier
Inverse Problems **20**(6), S1-S16, déc. 2004.
- [A60] A MUSIC algorithm for locating small inclusions buried in a half space from the scattering amplitude at a fixed frequency.
H. Ammari, E. Iakovleva, D. Lesselier
(SIAM) *Multiscale Modeling & Simulation* **3**(3), 597-628, 2005.
- [A61] Two numerical methods for recovering small inclusions from the scattering amplitude at a fixed frequency.
H. Ammari, E. Iakovleva, D. Lesselier
SIAM Journal on Scientific Computing **27**, 130-158, 2005.
- [A62] Shared issues of wavefield inversion and illustrations in 3-D diffusive electromagnetics
D. Lesselier, M. Lambert, G. Perrusson
Contribution invitée, Comptes-Rendus de l'Académie des Sciences, Physique, no. spécial « Interaction du Champ Electromagnétique avec l'Environnement », P.-N. Favennec et B. Picinbono, éditeurs hôtes, **6**, 6, 618-625, 2005.
- [A63] Calculation of eddy current testing probe signal with global approximation.
J. Pavo, D. Lesselier
IEEE Transactions on Magnetics **42**(4), 1419-1422, avril 2006.
- [A64] Level set methods for inverse scattering problems.
O. Dorn, D. Lesselier
Contribution sollicitée, Topical review, Inverse Problems, **22**, R67-131, août 2006.
- (Cet article a fait partie des 3% des articles les plus téléchargés de tous les journaux de l'Institute of Physics durant l'année 2006.) (Selon l'éditeur, compté à partir de données SCOPUS, cet article est entre 2006 et 2010 inclus le 2^{ème} article le plus cité parmi tous les articles du journal parus entre 2006 et 2009 inclus.)*
- [A65] MUSIC-type electromagnetic imaging of a collection of small 3-D bounded scatterers.
H. Ammari, E. Iakovleva, D. Lesselier, G. Perrusson
SIAM Journal on Scientific Computing **29**(2), 674-709, 2007.
- [A66] Error estimation of calculated ECT signal due to thin crack in a plate using a global approximation of the dipole density.
J. Pavo, L. Maurice, D. Prémel, D. Lesselier
International Journal on Applied Electromagnetics and Mechanics **25**, 1-4, 347-356, 2007.
- [A67] Development and validation of a 3D model dedicated to eddy current non-destructive testing of tubes by encircling probes.
C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
International Journal on Applied Electromagnetics and Mechanics **25**(1-4), 313-317, 2007.

- [A68] Multi-static response matrix of a 3-D inclusion in a half space and MUSIC imaging.
E. Iakovleva, S. Gdoura, D. Lesselier, G. Perrusson
IEEE Transactions on Antennas and Propagation **55**, 9, 2598-2609, sept. 2007.
- [A69] A two-step inverse scattering procedure for the qualitative imaging of homogeneous cracks in known host media: preliminary results.
M. Benedetti, M. Donelli, D. Lesselier, A. Massa
Antennas and Wireless Propagation Letters **6**, 592-595, déc. 2007.
- [A70] New discretisation scheme based on splines for Volume Integral Method: application to eddy-current testing of tubes.
C. Reboud, D. Prémel, D. Lesselier, B. Bisiaux
COMPEL **27**(1), 288-297, janv. 2008.
- [A71] Hybridization of volumetric and surface models for the T/R EC probe response due to a thin opening.
L. Maurice, D. Prémel, J. Pavo, D. Lesselier, A. Nicolas
COMPEL **8**, 1, 298-306, janv. 2008.
- [A72] Localization and characterization of simple defects in finite-size photonic crystals.
J.-P. Groby, D. Lesselier, *Journal of the Optical Society of America A* **25**(1), 146-152, janv. 2008.
- [A73] Multi-Static Response matrix of spherical scatterers and the back-propagation of singular fields.
E. Iakovleva, D. Lesselier
IEEE Transactions on Antennas and Propagation **56**, 3, 825-833, mars 2008.
- [A74] Electromagnetic modeling of a damaged ferromagnetic tube by a volume integral equation.
A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne
IEEE Transactions on Magnetics **44**(3), 623-632, mars 2008.
- [A75] Low-frequency electromagnetic characterization of buried obstacles by differential evolution with strategy of communication between groups and multi-resolution.
A. Bréard, G. Perrusson, D. Lesselier
in *Journal of Physics: Conference Series (6th International Conference on Inverse Problems in Engineering Theory and Practice ICIPE 2008)*, [SEP] Dedicated to J.A.G. (Andrew) Temple, **135**, 12024 (8pp), IOP Science, London, 2008.
- [A76] Hybrid differential evolution and retrieval of buried spheres in subsoil.
A. Bréard, G. Perrusson, D. Lesselier
IEEE Geoscience and Remote Sensing Letters **5**(4), 788-792, oct. 2008.
- [A77] 3D eddy-current imaging of metal tubes via gradient-based, controlled evolution of level sets.
J. Abascal, M. Lambert, D. Lesselier, O. Dorn
IEEE Transactions on Magnetics **44**(12), 4271-4279, déc. 2008
- [A78] Low-frequency electromagnetic modeling of conductive obstacles buried in subsoil as coupled ellipsoids.
A. Bréard, G. Perrusson, D. Lesselier
Radio Science **44** (21 pp), doi:10.1029/2008RS003939, mars 2009.
- [A79] A multi-resolution technique based on shape optimization for the reconstruction of homogeneous dielectric objects.
M. Benedetti, D. Lesselier, M. Lambert, A. Massa
Inverse Problems **25**, 1, Article 015009 (26 pp), 2009 (online, nov. 2008)
- [A80] Low-frequency scattering from perfectly conducting spheroidal bodies in a conductive medium with

magnetic dipole excitation.

P. Vafeas, G. Perrusson, D. Lesselier

International Journal on Engineering Sciences **47**(3), 372-390, 2009 (online, déc. 2008).

- [A81] MUSIC-type imaging of a thin penetrable inclusion from its multi-static response matrix.
W. K. Park, D. Lesselier
Inverse Problems **25**(7), Article 075002 (34pp), 2009 (on line, mai 2009).

- [A82] Imaging of a small dielectric sphere buried in a half space.
S. Gdoura, D. Lesselier, P. C. Chaumet, G. Perrusson
ESAIM: Proceedings **26**, 123-134, avril 2009.

- [A83] Reconstruction of thin electromagnetic inclusions by a level set method.
W. K. Park, D. Lesselier
Inverse Problems, **25**(8), Article 085010 (24pp), 2009 (on line, juillet 2009).

- [A84] Level set methods for inverse scattering – some recent developments.
O. Dorn, D. Lesselier
Sollicité, *Inverse Problems* **25**(12), Article 125001 (11pp), 2009 (on line, déc. 2009).

*(Cet article a été choisi comme un des hauts points de 2009 : **Highlights of 2009** - The Editorial Board has selected their highlights from Inverse Problems in 2009. This is intended not as a list of the 'best' articles, but as an interesting and stimulating reading list. Articles were selected for many reasons, some contain outstanding research and breakthroughs, some may have an especially clear exposition and are beautifully presented, and others are instructive, containing results and tools useful to many readers. These highlights contain several review articles from the Inverse Problems **25th Year Special Issue** published last year.*

*(Selon l'éditeur, en 2010 le 14^{ème} article le plus téléchargé de tous les volumes d'*Inverse Problems* depuis l'origine.)*

- [A85] Electromagnetic MUSIC-type imaging of perfectly conducting, arc-like cracks at single frequency.
W. K. Park, D. Lesselier
Journal of Computational Physics **228**, 8093–8111, 2009 (on line, août 2009).

- [A86] Multiple-shape reconstruction by means of multiregion level sets.
M. Benedetti, D. Lesselier, M. Lambert, A. Massa
IEEE Transactions on Geoscience and Remote Sensing **48**, 2330-2342, 2010 (on line, fév. 2010).

- [A87] Low-frequency dipolar excitation of a perfect ellipsoidal conductor.
G. Perrusson, P. Vafeas, D. Lesselier
Quarterly of Applied Mathematics **68**, 513-536, sept. 2010 (on line, mai 2010).

- [A88] Ultrasonic NDT optimization using Randomized Adaptive Differential Evolution.
B. Puel, S. Chatillon, D. Lesselier
in *Journal of Physics: Conference Series* (6th Groupe De Recherche 2501 and 9th Anglo-French Physical Acoustics Joint Conference), M. Lowe, N. Saffari, A. Lhemery, M. Deschamps, A. Leger and D. Abrahams eds, dedicated to J. A. G. (Andrew) Temple, **269**, 012008 (6 pp), 2010.

- [A89] Adaptive metamodels for crack characterization in eddy-current testing.
R. Douvenot, M. Lambert, D. Lesselier
IEEE Transactions on Magnetics **47**, 746-755, avril 2011

- [A90] Fast electromagnetic imaging of thin inclusions in half-space affected by random scatterers.
W.-K. Park, D. Lesselier
Waves in Random and Complex Media, special issue on Imaging in Complex Media, sollicité, **22** (21pp), mars 2011 (on line), janvier 2012 (in print), doi : 10.1080/17455030.2010.536854.

- [A91] Optimization of ultrasonic arrays design and setting using a differential evolution.
B. Puel, D. Lesselier, S. Chatillon, P. Calmon,
NdT & E International **44**, 797-803, 2011.
- [A92] Electromagnetic low-frequency dipolar excitation of two metal spheres in a conductive medium.
P. Vafeas, P. K. Papadopoulos, D. Lesselier
Journal of Applied Mathematics **2012**, ID 62861 (37 pp), doi:10.1155/2012/62861, 2012.
- [A93] 3D Generalized Finite-Difference modeling of electromagnetic time reversal – Impact of the density of dipoles for the localization of a dielectric obstacle in free space.
M. Benhamouche, L. Bernard, L. Pichon, D. Lesselier
IEEE Transactions on Magnetics **48**(2), 359-362, fév. 2012.
- [A94] Eddy current modeling of narrow cracks in planar-layered metal structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
IEEE Transactions on Magnetics **48**(10), 2551-2559, oct. 2012.
- [A95] Electromagnetic time reversal and scattering by a small dielectric inclusion
S. Gdoura, A. Wahab, D. Lesselier
Journal of Physics: Conference Series (New Computational Methods for Inverse Problems NCMIP 2012), L. Blanc-Féraud et P.-Y. Joubert eds, **386**, 012010 (6 pp), 2012.
- [A96] Multi-frequency imaging of perfectly conducting cracks via boundary measurements
W.-K. Park, D. Lesselier
Journal of Physics: Conference Series (IC-MSQUARE 2012: International Conference on Mathematical Modelling in Physical Sciences), T. Kosmas, E. Vagenas, and D. Vlachos eds, **410**, 012018 (6 pp), IOP Science, London, 2013.
- [A97] Efficient modeling of ECT signals for realistic cracks in layered half-space.
R. Miorelli, C. Reboud, T. Theodoulidis, N. Poulakis, D. Lesselier
IEEE Transactions on Magnetics **49**(10), 2886-2892, juin 2013
- [A98] Localization of metal targets by time reversal of electromagnetic waves - 3D-numerical and experimental study
M. Benhamouche, L. Bernard, M. Serhir, L. Pichon, D. Lesselier
EPJ-Applied Physics **64**, 24512 (11 p.), 2013.
- [A99] Electromagnetic response of anisotropic laminates to distributed sources.
Y. Zhong, M. Lambert, D. Lesselier, X. Chen
IEEE Transactions on Antennas and Propagation **62**(1), 247-256, janv. 2014.
- [A100] Coupled approach VIM-BEM for efficient modeling of ECT signal due to narrow cracks and volumetric flaws in planar layered media.
R. Miorelli, C. Reboud, T. Theodoulidis, J. Martinos, N. Poulakis, D. Lesselier
NdT & E International **62**, 178-183, mars 2014.
- [A101] Wide-band electromagnetic time reversal: selecting the instant of focus for scatterer localization.
M. Benhamouche, L. Bernard, M. Sehrir, L. Pichon, D. Lesselier
IEEE Transactions on Magnetics **50**, 7003204 (4 pp.), fév. 2014.
- [A102] Low-frequency on-site identification of a highly-conductive body buried in Earth from a model ellipsoid.
G. Perrusson, P. Vafeas, I. K. Chatjigeorgiou, D. Lesselier
The IMA Journal of Applied Mathematics **80**, 963-980, avril 2015 (on-line juil. 2014).
- [A103] Electromagnetic small-scale modeling of composite panels involving periodic arrays of circular

fibers.

C. Li, D. Lesselier, Y. Zhong

Applied Physics A, Materials Scie. Process. [Special Issue META'2014] **117**, 567-572, 2014.

[A104] Fast calculation of scattering by 3-D inhomogeneities in uniaxial anisotropic multilayers.

Y. Zhong, P. Ding, M. Lambert, D. Lesselier, X. Chen

IEEE Transactions on Antennas and Propagation **62**, 2415-2428, déc. 2014.

[A105] Estimates for the low-frequency electromagnetic fields scattered by two adjacent metal spheres in a lossless medium.

P. Vafeas, D. Lesselier, F. Kariotou

Mathematical Methods in the Applied Sciences **38**, 4210-4237, nov. 2015 (on-line, déc. 2014)

[A106] Full-wave model and numerical study of 3-D electromagnetic plane wave scattered by multilayered fiber-based periodic composites.

C. Li, D. Lesselier, Y. Zhong

Radio Science, **50**, 688-697, juil. 2015.

[A107] Scattering of obliquely incident electromagnetic plane waves by composite panel involving periodic arrays of circular fibers.

C. Li, D. Lesselier, Y. Zhong

IEEE Transactions on Antennas and Propagation **63**, 3168-3178, juil. 2015.

[A108] Recursive matrix schemes for composite laminates under plane-wave and Gaussian beam illumination.

C. Y. Li, D. Lesselier, Y. Zhong

Journal of the Optical Society of America B **32**, 1539-1549, juil. 2015.

[A109] Full-wave computational model of electromagnetic scattering by arbitrarily-rotated 1-D periodic multilayer structure.

C. Li, D. Lesselier, Y. Zhong

IEEE Transactions on Antennas and Propagation **64**, 1047-1060, mars 2016.

[A110] ECT-signal calculation of cracks near fastener holes using an integral equation formalism with dedicated Green's kernel.

K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier

IEEE Transactions on Magnetics **52**, 6200608, 8pp, avril 2016.

[A111] A new integral equation method to solve highly nonlinear inverse scattering problems.

Y. Zhong, M. Lambert, D. Lesselier, X. Chen

IEEE Transactions on Antennas and Propagation **64**, 1788-1799, mai 2016.

[A112] Super-resolution characteristics based on time-reversed single-frequency electromagnetic wave.

H. Tu, S. Xiao, D. Lesselier, M. Serhir

Journal of Electromagnetic Waves and Applications **30**(13), 1670-1680, juil. 2016.

[A113] Mathematical and numerical analysis of low-frequency scattering from a PEC ring torus in a conductive medium.

P. Vafeas, P. K. Papadopoulos, P.-P. Ding, D. Lesselier

Applied Mathematical Modelling **40**, 6477-6500, juil. 2016.

[A114] Electromagnetic modeling of periodically-structured fiber-reinforced single-layer laminate with multiple fibers missing.

Z. Liu, C. Li, D. Lesselier, Y. Zhong

Applied Physics A **122**(12), 993 (6pp), juil. 2016.

- [A115] Metamodel-based nested sampling for model selection in eddy-current testing.
C. Cai, S. Bilicz, T. Rodet, M. Lambert, D. Lesselier
IEEE Transactions on Magnetics **53**(4), 620091 (12pp), avril 2017.
- [A116] Electromagnetic modeling of damaged single-layer fiber-reinforced laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
IEEE Transactions on Antennas and Propagation **65**(4), 1855-1866, avril 2017.
- [A117] Wideband reflector-backed folded bowtie antenna for ground penetrating radar.
M. Serhir, D. Lesselier
IEEE Transactions on Antennas and Propagation **66**(3), 1056-1063, mars 2018.
- [A118] Electromagnetic imaging of damages in fibered layered laminates via equivalence theory.
Z. Liu, D. Lesselier, Y. Zhong
IEEE Transactions on Computational Imaging **4**(2), 219-227, mars 2018.
- [A119] Development of methods for the analysis defects of multi-mode TFM imaging.
K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy
Journal of Physics: Conference Series (10pp) **1017**, 012005, 2018.
- [A120] Fast full-wave analysis of damaged periodic fiber-reinforced laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
IEEE Transactions on Antennas and Propagation **66**(7), 3540-3547, juil. 2018.
- [A121] A fast integral equation based method for solving electromagnetic inverse scattering problems with inhomogeneous background.
K. Xu, Y. Zhong, X. Chen, D. Lesselier
IEEE Transactions on Antennas and Propagation **66**(8), 4228-4239, août 2018.
- [A122] Semi-analytical method for the identification of inclusions by air-cored coil interaction in ferromagnetic media.
P. Vafeas, A. Skarlatos, D. Lesselier, T. Theodoulidis
Mathematical Methods in the Applied Sciences **41**, 6422-6442 (MMA5168), juil. 2018.
- [A123] Development of the Specular Echoes Estimator to predict relevant modes for Total Focusing Method imaging.
K. Sy, P. Bredif, E. Iakovleva, O. Roy, D. Lesselier
NdT & E International **99**, 134-140, oct. 2018.
- [A124] Metamodel-based MCMC parameter inversion applied in eddy current flaw characterization.
C. Cai, R. Miorelli, M. Lambert, T. Rodet, D. Lesselier, P.-E. Lhuillier
NdT & E International **99**, 13-22, oct. 2018.
- [A125] Model based characterisation of delamination by means of thermographic inspection
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
Journal of Physics: Conference Series **1476**, 012005 (10pp), mars 2020.
- [A126] Surrogate modeling of indoor down-link human exposure based on sparse polynomial chaos expansion.
Z. Liu, D. Lesselier, B. Sudret, J. Wiart
International Journal for Uncertainty Quantification **10**, 145-163, mars 2020.
- [A127] Electromagnetic modeling of damaged fiber-reinforced laminates.
Z. Liu, C. Li, Y. Zhong, D. Lesselier
Journal of Computational Physics **409**, 109318, mai 2020.

[A128] Surrogate modeling based on resampled polynomial chaos expansions.

Z. Liu, D. Lesselier, B. Sudret, J. Wiart

Reliability Engineering and System Safety, 107008, mai 2020.

[A129] A processing framework for tree roots reconstruction using Ground-Penetrating Radar under heterogeneous conditions.

A. Aboudourib, M. Serhir, D. Lesselier

IEEE Transactions on Geoscience and Remote Sensing **59**(1), 208-219, (on-line, mai 2020) janv. 2021.

[A130] A complete framework for acousto-electric tomography with numerical examples.

C. Li, K. An, K. Zheng, D. Lesselier

IEEE Access **8**, 98508-9851 (on-line mai 2020), déc. 2020.

[A131] Subwavelength micro-structure probing by binary-specialized methods: contrast source and convolutional neural networks.

P. Ran, Y. Qin, D. Lesselier, M. Serhir

IEEE Transactions on Antennas and Propagation **69**(2), 1030-1039, (on-line août 2020) fév. 2021.

[A132] Optimization algorithms for ultrasonic array imaging in homogeneous anisotropic steel components with unknown properties.

C. Ménard, S. Robert, R. Miorelli, D. Lesselier

NdT&E International **116**, 102327, (on-line août 2020) déc. 2020.

[A133] Microwave breast imaging with prior ultrasound information.

Y. Qin, T. Rodet, M. Lambert, D. Lesselier

IEEE Open Journal of Antennas and Propagation, Special Section Direct and Inverse Electromagnetic Scattering Methods **1**, 472-482, (on-line août 2020) 2020.

[A134] Shape reconstruction of delamination defects using thermographic infrared signals based on an enhanced Canny approach.

A. Ratsakou, A. Skarlatos, C. Reboud, D. Lesselier,

Infrared Physics and Technology **111**, 103527, déc. 2020.

[A135] Electromagnetic micro-structure non-destructive testing: sparsity-constrained and combined convolutional-recurrent neural networks methods.

P. Ran, D. Lesselier, M. Serhir

Electronics, Special issue New Trends and Future Challenges in Computational Microwave Imaging **9**, 1750, 16 pp, déc. 2020.

[A136] Joint inversion of electromagnetic and acoustic data with edge-preserving regularization for breast imaging.

Y. Qin, T. Rodet, M. Lambert, D. Lesselier

IEEE Transactions on Computational Imaging **7**, 347-360, avril 2021.

[A137] Ultrasonic array imaging of nuclear austenitic V-shape welds with inhomogeneous and unknown anisotropic properties.

C. Menard, S. Robert, D. Lesselier

Applied Sciences **11**, 6505, juil. 2021.

[A138] Imaging of sub-wavelength micro-structures by time reversal and neural networks, from synthetic to laboratory-controlled data.

P. Ran, S. Chen, M. Serhir, D. Lesselier

IEEE Transactions on Antennas and Propagation **69**(12), 8753-8762, déc. 2021

[A139] On homogenization of fiber-reinforced polymers.

C. Li, D. Lesselier
URSI Radio Science Letters, **3** (5 pp), déc. 2021.

- [A140] Group sparsity penalized method for non-linear inverse scattering problems.
Y. Zhang, M. Lambert, A. Fraysse, D. Lesselier
IEEE Open Journal of Antennas and Propagation **3**, 48-58, 2022.

- [A141] Breast imaging by convolutional neural networks from joint microwave and ultrasonic data.
Y. Qin, P. Ran, T. Rodet, D. Lesselier
IEEE Transactions on Antennas and Propagation, **70**(8), 6265-6276, sept. 2022

- [A142] Fused microwave and ultrasonic breast imaging within the framework of a joint variational Bayesian approximation.
Y. Qin, T. Rodet, D. Lesselier
IEEE Transactions on Antennas and Propagation **70**(12), 12199-12211, déc. 2022.

- [A143] Unrolled convolutional neural network for full-wave inverse scattering.
Y. Zhang, M. Lambert, A. Fraysse, and D. Lesselier
IEEE Transactions on Antennas and Propagation, **71**(1), 947-956, janv. 2023.

Soumis

- [AS1] Identification and characterization of damaged fiber-reinforced laminates in a Bayesian framework
V. Noël, T. Rodet, and D. Lesselier
International Journal on Applied Electromagnetics and Mechanics, oct. 2023

- [AS2] Electromagnetic breast imaging and uncertainty quantification with Bayesian neural networks.
V. Noël, T. Rodet, and D. Lesselier
IEEE Transactions on Computational Imaging, déc. 2023

— articles de diffusion de l'information scientifique (avec comité de lecture) (tous sur invitation)

- [AD1] Tomographie ultrasonore par diffraction et diagnostic médical.
B. Duchêne, D. Lesselier, W. Tabbara
Le Courrier du CNRS, Dossiers Scientifiques, Signaux et Images **77**(17), juin 1991.

- [AD2] On modified gradient solution methods using the binary aspect of the unknown electromagnetic parameters and their application to the Ipswich data.
B. Duchêne, D. Lesselier
(*a mini-feature article*) *Antennas Propagation Magazine* **38**(3), 45-47, 1996.

- [AD3] Inversion of the 1996 Ipswich data using binary specializations of modified gradient methods.
B. Duchêne et D. Lesselier, R. E. Kleinman
(*a mini-feature article*) *Antennas Propagation Magazine* **39**(2), 9-12, 1997.

Activités de (co-)édition

- [E1] D. Lesselier et A. Razek, Co-Editeurs, *Electromagnetic Non-Destructive Evaluation (III)*, Studies in Applied Electromagnetics and Mechanics **15**, IOS Press, Amsterdam, 328 p., 1999.
ISBN: 90-5199-375-7

(Correspondant à l'édition des contributions étendues soumises à l'issue de ENDE'1998, Chatou.) (Une critique de cet ouvrage a été effectuée par R. S. Anderssen, 2000 *Inverse Problems* **16**, 1081. doi : 10.1088/0266-5611/16/4/701)

- [E2] D. Lesselier et T. Habashy, Co-Editeurs Hôtes, Section Spéciale sur invitations, *Electromagnetic Imaging and Inversion of the Earth Sub-Surface*, du journal *Inverse Problems*, vol. 16, no. 5, pp. 1083-1376, oct. 2000.
(14 articles, invités, ont été pris en charge par les seuls co-éditeurs.) (L'article qu'y donna A. T. de Hoop a été sélectionné comme l'article de l'année 2000 de la collection du 25^{ème} anniversaire de *Inverse Problems*.)
- [E3] D. Lesselier et J. Bowler, Co-Editeurs Hôtes, Section Spéciale sur pré-sélection, *Electromagnetic and Ultrasonic Nondestructive Evaluation*, du journal *Inverse Problems*, vol. 18, no. 6, pp. 1733-1958, déc. 2002.
(12 des articles, contribués sur invitation, ont au final été sélectionnés après lecture et adjudication.)
- [E4] D. Prémel, T. Sollier, D. Lesselier, Co-Editeurs, *Electromagnetic Non-Destructive Evaluation (VIII)*, Studies in Applied Electromagnetics and Mechanics **24**, Amsterdam, IOS Press, 296 pp., 2004.
ISBN: 1-58603-407-3
(Correspondant à l'édition des contributions étendues soumises à l'issue de ENDE'2003, Saclay.)
- [E5] A. Bossavit, D. Lesselier, A. Razek, Co-Editeurs Hôtes, *ISEM 2003 Special Issue of the International Journal on Applied Electromagnetics and Mechanics* **19**, nos. 1-4, 2004.
(Correspondant à l'édition au sein du journal IJAEM de la sélection de 124 des 165 contributions étendues soumises à l'issue de ISEM'2003, Versailles.)
- [E6] D. Lesselier et W. C. Chew, Co-Editeurs Hôtes, Section Spéciale sur pré-sélection, *Electromagnetic Characterization of Buried Obstacles*, du journal *Inverse Problems*, vol. 20 no. 6, pp. S1-S256, déc. 2004.
(14 des articles, contribués sur sollicitation, ont au final été sélectionnés après lecture et adjudication.)
- [E7] O. Dorn et D. Lesselier, Co-Editeurs Hôtes, Section Spéciale sur contribution, *Electromagnetic Inverse Problems: Emerging Methods and Novel Applications*, du journal *Inverse Problems*, date de lancement, juillet 2009, date de parution on-line, printemps 2010, in print, vol. 26, no. 7, juillet 2010.
<http://iopscience.iop.org/0266-5611/26/7> (284 pp total)
(16 des articles, contribués sur sollicitation et appel à contribution, ont au final été sélectionnés après lecture et adjudication, et ils constituent le numéro entier de juillet 2010.) (Selon l'éditeur, 9 de ces articles font partie des 30 articles, daté 2010, les plus téléchargés en 2010.)
- [E8] F. Le Chevalier, D. Lesselier, et R. Staraj, éditeurs, *Antennes Non Standard : Nouvelles Technologies pour les Architectures de Capteurs*, Collection SEE, Hermès/Lavoisier, Paris, 462 p., octobre 2010.
ISBN-13: 978-2-74622-995-2
- [E9] F. Le Chevalier, D. Lesselier, et R. Staraj, éditeurs, *Non-standard Antennas*, Wiley-ISTE, London 480 p., avril 2011. (Version anglaise, avec mise à jour, du précédent ouvrage.)
ISBN-13: 978-1-84821-274-9
- [E10] V. Monebhurrun, D. Lesselier, éditeurs, *Radio and Antenna Days of the Indian Ocean (RADIO 2012)*, IOP Conference Series: Materials Science and Engineering, **44**, 27 contributions, IoP Publishing, avril 2013.
Preface: doi:10.1088/1757-899X/44/1/011001
(Correspondant à l'édition d'une sélection de 27 contributions étendues parmi toutes celles soumises à l'issue de *Radio and Antenna Days of the Indian Ocean*, Sept. 2012, Ile Maurice.)
- [E11] D. Lesselier, C. Reboud, éditeurs, *Electromagnetic Non-Destructive Evaluation (XXI)*, in Series "Studies in Applied Electromagnetics and Mechanics", Volume 43, Open Access, IOS Press e-book,
<http://ebooks.iospress.nl/volume/electromagnetic-non-destructive-evaluation-xxi>
(Correspondant à l'édition d'une sélection de 35 contributions étendues parmi toutes celles soumises à l'issue de l'*Electromagnetic Non-Destructive Evaluation International Workshop 2017*, Sept. 2017, Gif-sur-Yvette, <http://www.ende2017.fr/>, L2S-CEA-LIST & DIGITEO Manifestation Scientifique.)

- [E12] M. Serhir, D. Lesselier, éditeurs *Ground Penetrating Radar, from Theoretical Endeavors to Computational Electromagnetics, Signal Processing, Antenna Design and Field Application*" in the Series "Waves", The Sciences Encyclopedia, ISTE-Wiley e-book et print, w. French translation in addition, à paraître, 2023.
- [E13] New Trends in Electromagnetic Inverse Problems, Journal *Inverse Problems*, Special Issue O. Dorn, Y. Zhong, D. Lesselier, conveners, (opening in) 2023.
- + *Radio Science* : D. Lesselier en éditeur de trois *topical reviews* (processus débuté 2010, conclu 2011)
- A review on array mutual coupling analysis, C. Craeye and D. Gonzalez-Ovejero, **46** RS2012 (25 pp.) 2011, doi:10.1029/2010RS004518
 - Localization, tracking, and imaging of targets in wireless sensor networks - An invited review, F. Viani, P. Rocca, G. Oliveri, D. Trinchero, and A. Massa, **46** RS5002 (12 pp) 2011, doi:10.1029/2010RS004561
 - Refractivity estimation from sea clutter: An invited review, A. Karimian, C. Yardim, P. Gerstoft, and W. S. Hodgkiss, **46** RS6013 (16 pp.) RS6013, 2011^[1] doi:10.1029/2011RS004818
-

Chapitres d'ouvrages avec comité de lecture

- [LC1] Buried, 2-D penetrable objects illuminated by line-sources: FFT-based iterative computations of the anomalous field.
D. Lesselier, B. Duchêne
Application of Conjugate Gradient Methods to Electromagnetics and Signal Analysis, 400-438, T. K. Sarkar ed., PIER Series 5, Elsevier, New York, 1991. (Disponible on-line, <http://www.jpier.org/PIER/>)
ISBN: 0-444-01604X
- [LC2] Wavefield inversion of objects in stratified environments. From backpropagation schemes to full solutions.
D. Lesselier, B. Duchêne
Review of Radio Science 1993-1996, 235-268, R. Stone ed.-in-Chief, Oxford University Press, Oxford, 1996.
ISBN: 0-19-856531-3 & 0-19-856532-1
- [LC3] Identification d'objets ou de milieux par inversion de signaux acoustiques ou électromagnétiques.
D. Lesselier, A. Wirgin
Problèmes Inverses – De l'Expérimentation à la Modélisation, 143-176, M. Bonnet ed., vol. Arago #21, Observatoire Français des Techniques Avancées (OFTA), Paris, 1999.
<https://ofta.polytechnique.org/Sommaires/22/>, **ISBN: 2-906028-08-8**
- [LC4] On nonlinearized wavefield inversion methods and the identification of buried objects.
D. Lesselier, B. Duchêne
Analytical and Computational Methods in Scattering and Applied Mathematics, in memory of R. E. Kleinman, 177-194, F. Santosa et I. Stakgold eds, Chapman & Hall/CRC, Research Notes in Mathematics **417**, Boca Raton, 2000.
ISBN: 1-58488-159-3
- [LC5] On the characterization of objects in shallow water using rigorous inversion methods.
B. Duchêne, M. Lambert, D. Lesselier
Inverse Problems in Underwater Acoustics, 127-147, M. I. Taroudakis et G. N. Makrakis eds, Lecture Notes in Physics, Springer, Berlin, 2001.
ISBN: 0-387-95248-9
- [LC6] Eddy current scattering and inverse scattering, Green's integral and variational formulations.
D. Lesselier, A. Razek

Scattering. Scattering and Inverse Scattering in Pure and Applied Science: Part 1— Scattering of Waves by Macroscopic Targets, chapitre 1.6.6, 486-507, R. Pike et P.-C. Sabatier eds-in-Chief, Academic Press, Londres, 2002.

ISBN-10: 0126137609 | ISBN-13: 978-0126137606

- [LC7] Introduction à la diffraction inverse en acoustique et élasticité.
M. Lambert, M. Bonnet, D. Lesselier
Chapitre 1.4, 82-101, *Matériaux et Acoustique*, M. Bruneau et C. Potel éds., Hermès Science, série Sciences et Ingénierie des Matériaux, 2006.
ISBN: 2-7462-1450-4 & 2-7462-1363-X

- [LC8] Level set techniques for structural inversion in medical imaging.
O. Dorn, D. Lesselier
Deformable Models: Theory and Biomaterial Applications, 61-90, J. Suri et A. Farag éds., Springer, Topics in Biomedical Engineering, International Book Series, Berlin, 2006.
ISBN: 0-387312048

- [LC9] Introduction to inverse scattering in acoustics and elasticity (*volume en anglais, cf. LC7*)
M. Lambert, M. Bonnet, D. Lesselier
Materials and Acoustics Handbook, Part 3, Chap. 16, 413-430, M. Bruneau et C. Potel éds., ISTE/Wiley, Londres, 2009.
ISBN: 978-1-848-21074-5

- [LC10] Level set methods for structural inversion and image reconstruction
O. Dorn, D. Lesselier
Handbook of Mathematical Methods in Imaging, Chap. 10, 385-444, O. Scherzer ed., Springer Science & Business Media LLC, Berlin, 2011.
ISBN-13: 978-0-387-92919-4, doi: 10.1007/978-0-387-92920-0_10.

- [LC11] GPR for tree roots reconstruction under heterogeneous soil conditions (*titre provisoire*)
A. Aboudourib, M. Serhir, D. Lesselier
Ground Penetrating Radar, from Theoretical Endeavors to Computational Electromagnetics, Signal Processing, Antenna Design and Field Application in the Series "Waves", The Sciences Encyclopedia, ISTE-Wiley e-book et print, à paraître, 2023.

Contributions d'actes de congrès édités

- [La1] Imaging inhomogeneous media by diffraction tomography techniques. Critical examination and prospects.
D. Lesselier, B. Duchêne, W. Tabbara
Inverse Problems: an Interdisciplinary Study, 35-49, P. C. Sabatier ed., Advances in Electronics and Electron. Physics, Suppl. 19, Academic Press, Londres, 1987.
ISBN: 0-12-014581-2
- [La2] Electromagnetic probing from boreholes. Comparison of exact and approximate methods.
W. Tabbara, D. Lesselier, H. Galan-Malaga
Inverse Problems: an Interdisciplinary Study, 51-59, P. C. Sabatier ed., Advances in Electronics and Electron Physics, Suppl. 19, Academic Press, Londres, 1987.
ISBN: 0-12-014581-2
- [La3] Acoustical imaging of 2-D fluid targets buried in a half-space. A diffraction tomography approach using line-source insonification.
B. Duchêne, D. Lesselier, W. Tabbara
Electromagnetic and Acoustic Scattering: Detection and Inverse Problem, 111-122, C. Bourrelly et P. Chiappetta éds., World Scientific, Singapour, 1989.

ISBN-13: 9789971507480

- [La4] Fast iterative calculation of ultrasonic scattering by buried 2-D fluid targets, insonified by line sources.
D. Lesselier, B. Duchêne
in Proc. *IEEE 1989 Ultrasonics Symposium*, Montréal, oct. 1989.
IEEE Conference Publications, doi 10.1109/ULTSYM.1989.67123 (5pp)
- [La5] Exact and approximate probing of sea-bottom.
R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
in Proc. *IEEE 1989 Ultrasonics Symposium*, Montréal, oct. 1989.
IEEE Conference Publications, 10.1109/ULTSYM.1989.67004 (5 pp)
- [La6] Probing one-dimensional inhomogeneous media: how can it be done?
D. Lesselier, W. Tabbara
Electromagnetic and Acoustic Scattering: Detection and Inverse Problem, 303-316, C. Bourrelly et P. Chiappetta eds., World Scientific, Singapour, 1989.
ISBN-13: 978-9971507480
- [La7] Computation of electromagnetic field diffracted by an inhomogeneity in metal: a first step in magnetic imaging.
R. Zorgati, A. Bernard et F. Pons, B. Duchêne, D. Lesselier et W. Tabbara
Nondestructive Characterization of Materials, 590-597, P. Höller et al. eds, Springer, Berlin, 1989.
ISBN-13: 978-0387518565
- [La8] Numerical investigation of the probing of sea-bottom using exact and approximate methods.
R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
Inverse Methods in Action, 294-301, P. C. Sabatier ed., Inverse Problems and Theoretical Imaging, Springer, Berlin, 1990.
ISBN-13: 978-0387519944
- [La9] On the microwave and ultrasonic imaging of buried targets.
L. Chommeloux, B. Duchêne, C. Pichot, D. Lesselier, W. Tabbara, J.-C. Bolomey
Contribution invitée, *Direct and Inverse Methods in Radar Polarimetry*, W. M. Boerner et al. eds, 1083-1104, NATO ASI Series C: Mathematical and Physical Sciences 143, Kluwer Acad. Pub., Dordrecht, 1992.
ISBN-13: 978-0792314981
- [La10] On the eddy current imaging of defects in a conductive half-space.
R. de Oliveira Bohbot, B. Duchêne, D. Lesselier, N. Coutanceau
Inverse Problems in Scattering and Imaging, 220-231, M. A. Fiddy ed., Proc. SPIE 1767, SIAM, Philadelphia, 1992.
ISBN-13: 978-0819409409
- [La11] Eddy current imaging of defects in a conductive half-space as an inverse wave scattering problem: recent algorithmic advances.
D. Lesselier, R. de Oliveira Bohbot, B. Duchêne, C. Rozier, F. Brouaye, M. Lefebvre
Contribution invitée, *Inverse Scattering and Potential Problems in Mathematical Physics*, 17-31, R. E. Kleinman, R. Kress et E. Martensen eds, Methoden und Verfahren der mathematischen Physik **40**, Peter Lang GmbH, Frankfurt am main, 1995.
ISBN: 3-631-47926-3
- [La12] Eddy current characterization of 3-D bounded defects in metal tubes using a wavefield integral formulation modeling.
V. Monebhurrun, B. Duchêne, et D. Lesselier, R. Zorgati
Nondestructive Testing of Materials, 195-202, R. Collins, W. D. Dover, J. R. Bowler et K. Miya eds, Studies in Applied Electromagnetics and Mechanics **8**, IOS Press, Amsterdam, 1995.

ISBN-13: 978-90-5199-239-7

- [La13] Mapping 2-D defects in a conductive half-space by eigenfunction expansions in K-space of Fourier-Laplace transforms.
A. Litman et D. Lesselier, C. De Mol
Nondestructive Testing of Materials, 175-183, R. Collins, W. D. Dover, J. R. Bowler et K. Miya eds, Studies in Applied Electromagnetics and Mechanics **8**, IOS Press, Amsterdam, 1995.
ISBN-13: 978-90-5199-239-7
- [La14] Characterization of a cylindrical vibrating body in shallow water from partial measurement of its radiated field.
C. Rozier, D. Lesselier
in Proc. *Oceans 1995 MTS/IEEE*, San Diego, oct. 1995
ISBN 0-933957-14-9, IEEE Conference Publications, doi:[10.1109/OCEANS.1995.528898](https://doi.org/10.1109/OCEANS.1995.528898) (5 pp)
- [La15] Optimal shape reconstruction of a perfect target placed in shallow water.
C. Rozier et D. Lesselier, T. Angell
Underwater Acoustics, **1**, 27-32, J. S. Papadakis ed., FORTH-IACM, Crete Univ. Press, 1996.
ISBN: 960-85709-2-1
- [La16] On the retrieval of an extended vibrating source in shallow water.
C. Rozier, D. Lesselier
Underwater Acoustics, **1**, 397-402, J. S. Papadakis ed., FORTH-IACM, Crete Univ. Press, 1996.
ISBN: 960-85709-2-1
- [La17] Location and reconstruction of objects using a modified gradient approach.
R. E. Kleinman et P. M. Van den Berg, B. Duchêne et D. Lesselier
Contribution invitée, *Inverse Problems of Wave Propagation and Diffraction*, 143-158, G. Chavent et P. C. Sabatier eds, Lecture Notes in Physics, Springer, Berlin, 1997
ISBN-13: 978-3-540-62865-1
- [La18] Reconstruction of an impenetrable obstacle immersed in a shallow water acoustic waveguide.
C. Rozier et D. Lesselier, T. Angell et R. E. Kleinman
Inverse Problems of Wave Propagation and Diffraction, 130-142, G. Chavent et P. C. Sabatier eds, Lecture Notes in Physics **486**, Springer, Berlin, 1997.
ISBN-13: 978-3-540-62865-1
- [La19] A level-set approach for eddy current imaging of defects in a conductive half-space.
A. Litman et D. Lesselier, F. Santosa
Inverse Problems of Wave Propagation and Diffraction, 250-262, G. Chavent et P. C. Sabatier eds, Lecture Notes in Physics **486**, Springer, Berlin, 1997.
ISBN-13: 978-3-540-62865-1
- [La20] The inversion of objects buried in a layered embedding: the outline of a multi-pronged investigation.
D. Lesselier, B. Duchêne
Contribution invitée, *1st EMSL User Workshop Proceedings*, 67-74, G. Nesti ed., EUR Report # 17326 EN, 1997.
EUR-OP Reference: CL-NA-17326-EN-C
- [La21] INES: 3D eddy current imaging for a nondestructive evaluation system applied to steam generator tubes.
R. Zorgati, V. Monebhurrun, P. Gros, B. Duchêne, D. Lesselier, C. Chavant
Review of Progress in Quantitative Nondestructive Evaluation, **16A**, 271-278, D. O. Thompson et D. E. Chimenti eds, Plenum Press, New York, 1997.
ISBN: 0-306-45597-8

- [La22] Multifrequency version of the modified gradient algorithm for reconstruction of complex refractive indices.
R. E. Kleinman, P. M. Van den Berg et B. J. Kooij, B. Duchêne, D. Lesselier, M. Lambert et V. Monebhurrun
Contribution invitée, Computational, Experimental, and Numerical Methods for Solving Ill-Posed Inverse Imaging Problems: Medical and Nonmedical Applications, 76-87, R. L. Barbour, M. J. Carvlin et M. Fiddy eds, Proc. SPIE 3171, SPIE, Bellingham, 1997.
ISBN-13: 978-0819425935
- [La23] Eddy current nondestructive evaluation of a 3-D bounded defect in a metal tube using volume integral methods and nonlinearized inversion schemes.
V. Monebhurrun, D. Lesselier, B. Duchêne
Electromagnetic Non-Destructive Evaluation (II), 261-270, R. Albanese, G. Rubinacci, T. Takagi et S. S. Udpas eds, Studies in Applied Electromagnetics and Mechanics 14, IOS Press, Amsterdam, 1998.
ISBN-13: 978-90-5199-375-2
- [La24] Optimal contour reconstruction of a sound-hard obstacle in a shallow water acoustic waveguide.
M. Bocly, M. Lambert, C. Rozier, D. Lesselier
Underwater Acoustics, 2, 643-648, A. Alippi et G. B. Canelli eds, CNR-IDAC, Rome 1998.
ISBN: 88-87447-02-0
- [La25] Eddy current nondestructive evaluation using SQUIDS.
V. Monebhurrun, D. Lesselier, et B. Duchêne, A. Ruosi, M. Valentino, G. Pepe et G. Peluso
Electromagnetic Non-Destructive Evaluation (III), 171-181, D. Lesselier et A. Razek eds, Studies in Applied Electromagnetics and Mechanics 15, IOS Press, Amsterdam, 1999.
ISBN-13: 978-90-5199-444-5
- [La26] On the numerical modeling of eddy current nondestructive evaluation with the FEM-BEM TRIFOU software in controlled configurations.
V. Bertrand, D. Lesselier, et S. Mastorchio
Electromagnetic Non-Destructive Evaluation (IV), 32-41, S. S. Udpas ed., Studies in Applied Electromagnetics and Mechanics 17, IOS Press, Amsterdam, 2000.
ISBN-13: 978-1-58603-023-0
- [La27] On the modeling and inversion of 3-D inclusions in conductive media using extended Born models in the diffusive regime.
D. Dos Reis, M. Lambert, D. Lesselier
Applied Electromagnetics and Mechanics, 481-482, T. Takagi et M. Uesaka eds, JSAEM Studies in Applied Electromagnetics and Mechanics 9, JSAEM, Tokyo, 2001.
ISBN: 4-931455-08-5
- [La28] Eddy-current evaluation of 3-D defects in a metal plate: a first analysis of a contrast-source gradient method.
D. Dos Reis, M. Lambert, D. Lesselier
Electromagnetic Non-Destructive Evaluation (VI), 52-59, F. Kojima, T. Takagi, S. S. Udpas, et J. Pavo eds, Studies in Applied Electromagnetics and Mechanics 23, IOS Press, Amsterdam, 2002.
ISBN-13: 978-1-58603-245-6
- [La29] On the controlled evolution of level sets and like methods: the shape and contrast reconstruction
C. Ramananjaona, M. Lambert, D. Lesselier, J.-P. Zolésio
in *Acoustics, Mechanics, and the Related Topics of Mathematical Analysis*, 243-250, A. Wirgin ed., World Scientific, Londres, 2003.
ISBN-13: 978-981-238-264-1, 978-981-270-440-5 (ebook)
- [La30] Low-frequency electromagnetic modeling and retrieval of simple orebodies in a conductive Earth.
G. Perrusson et D. Lesselier, P. Vafeas, G. Kamvyssas et G. Dassios.

Progress in Analysis, **2**, 1413-1422, H. G. W. Begehr, R. P. Gilbert, et M. W. Wong eds., World Scientific, Londres, 2003.

ISBN-13: 978-981-238-572-7, 978-981-279-425-3 (ebook)

- [La31] A fast model of eddy-current ferrite-cored probes for NDE.
F. Buvat, G. Pichenot, D. Prémel, M. Lambert, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (VIII)*, 44-51, D. Prémel, T. Sollier, et D. Lesselier eds., Studies in Applied Electromagnetics and Mechanics **24**, IOS Press, Amsterdam, 2004.
ISBN-13: 978-1-58603-407-8
- [La32] Eddy-current modeling of ferrite-cored probes.
F. Buvat, G. Pichenot, D. Prémel, D. Lesselier, M. Lambert, H. Voillaume, J.-P. Choffy
Review of Progress in Quantitative Nondestructive Evaluation **24A-B** 463-470, D. O. Thompson et D. E. Chimenti eds., AIP Conference Proceedings, 2005.
ISBN-13: 978-0735402454
- [La33] Three-dimensional electromagnetic field in a conductive cylinder at eddy-current frequencies.
G. Miclau, G. Pichenot, D. Prémel, D. Lesselier, M. Lambert
in *Electromagnetic Non-Destructive Evaluation (VII)*, 62-69, G. Dobmann ed., Studies in Applied Electromagnetics and Mechanics **26**, IOS Press, Amsterdam, 2006.
ISBN: 1-58603-584-0
- [La34] Analysis of the potentialities and limitations of the integration between the IMSA and the level set method for inverse scattering.
M. Benedetti, D. Lesselier, A. Massa, M. Lambert
in Proc. *1st European Conference on Antennas and Propagation (EuCAP)*, Nice, nov. 2006.
ISBN: 978-92-9092-937-6, IEEE Conference Publications, doi: 10.1109/EUCAP.2006.4584517
- [La35] Volumetric and surface flaw models for the computation of the EC T/R probe signal due to a thin opening flaw.
L. Maurice, D. Prémel, J. Pavo, D. Lesselier, A. Nicolas
Electromagnetic Non-Destructive Evaluation (X), 49-56, S. Takahashi et H. Kikuchi, eds, Studies in Applied Electromagnetics and Mechanics **28**, IOS Press, Amsterdam, 2007.
ISBN-13: 978-1-58603-752-9
- [La36] Recent advances in simulation of eddy current testing of tubes and experimental validations.
C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
Review of Progress in Quantitative Nondestructive Evaluation **25A-B** 241-248, D. O. Thompson et D. E. Chimenti eds., AIP Conference Proceedings, 2006.
ISBN-13: 978-0735403123
- [La37] MUSIC-type imaging of dielectric spheres from single-frequency, asymptotic and exact array data.
S. Gdoura, D. Lesselier, G. Perrusson, P.-C. Chaumet
PIERS 2007 Prague Proceedings, 348-352, J. A. Kong ed.. The Electromagnetics Academy, Cambridge, 2007.
ISBN-13: 978-1-934142-02-8. doi: 10.2529/PIERS070314082842
- [La38] A qualitative two-step inversion approach for the reconstruction of subsurface defects.
M. Donelli, M. Benedetti, M., D. Lesselier, A. Massa
in Proc. *IEEE International Geoscience and Remote Sensing Symposium (IGARSS'09)*, IV-224-IV-227, 2008.
ISBN: 978-1-4244-3394-0, IEEE Conference Publications, doi: 10.1109/IGARSS.2009.5417331
- [La39] Numerical modeling of eddy current nondestructive evaluation of ferromagnetic tubes via an integral equation approach.
A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne

in *Electromagnetic Non-Destructive Evaluation (XI)*, A. Tamburrino, Y. Melikhov, Z. Chen et L. Udpas eds., Studies in Applied Electromagnetics and Mechanics **31**, IOS Press, Amsterdam, 2008.
ISBN-13: 978-1-58603-896-0

- [La40] Low-frequency interaction of magnetic dipoles and perfectly conducting spheroidal bodies in a conductive medium.
P. Vafeas, G. Perrusson, D. Lesselier
in *Advanced Topics in Scattering and Biomedical Engineering, Proc. 8th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering*, 107-114, A. Charalambopoulos, D. I. Fotiadis et D. Polyzos eds., World Scientific, Londres 2008.
ISBN-13: 978-981-281-484-5, ISBN-13: 978-981-281-485-2 (ebook)
- [La41] Non-iterative MUSIC-type algorithm for reconstructing two-dimensional thin dielectric inclusions.
W. K. Park, H. Ammari, D. Lesselier
in *EKC 2008 - Proceedings of the EU-Korea Conference on Science and Technology*, Part 2, 297-305, S. D. Yoo ed., Springer Proceedings Physics **124**, Berlin, 2008.
Hardcover, ISBN-13: 978-3-540-85189-9; Softcover, 978-3-642-09892-5
- [La42] Nonlinearized mapping of volumetric defect affecting a metal tube.
J. Abascal, M. Lambert, D. Lesselier, O. Dorn
in *Electromagnetic Non-Destructive Evaluation (XII)*, 172-179, Y.-K. Shin, H.-B. Lee and S.-J. Song eds., Studies in Applied Electromagnetics and Mechanics **32**, IOS Press, Amsterdam, 2009.
ISBN-13: 978-1-60750-023-0
- [La43] On the imaging of two-dimensional thin inclusions by a MUSIC-type algorithm from boundary measurements.
W. K. Park, H. Ammari, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XII)*, 297-304, Y.-K. Shin, H.-B. Lee and S.-J. Song eds., Studies in Applied Electromagnetics and Mechanics **32**, IOS Press, Amsterdam, 2009.
ISBN-13: 978-1-60750-023-0, doi: 10.10.3233/978.1.60750.023.0.297.
- [La44] On the retrieval of electromagnetically thin screens by non-iterative fast solution methods.
D. Lesselier, W. K. Park
Contribution invitée, in Proc. *International Conference on Electromagnetics in Advanced Applications (ICEAA 09)*, 74-77, IEEE Xplore, 2009.
ISBN: 978-1-4244-3385-8, IEEE Conference Publications, doi: 10.1109/ICEAA.2009.5297605
- [La45] Low-frequency modeling of the interaction of a magnetic dipole and two perfectly conducting spheres in a conductive medium.
P. Vafeas, D. Lesselier
in *Advanced Topics in Scattering and Biomedical Engineering*, 20-27, A. Charalambopoulos, D. I. Fotiadis, and D. Polyzos eds., World Scientific, Singapore, 2010.
ISBN-13: 978-981-4322-02-7, 978-981-4322-03-4 (ebook)
- [La46] Level set method for reconstruction of thin electromagnetic inclusions.
W. K. Park, D. Lesselier
in *EKC 2009 Proceedings of the EU-Korea Conference on Science and Technology*, Springer Proceedings Physics **1**, **135**, 99-108, J. H. Lee, H. Lee, and J.-S. Kim eds., Springer, Berlin, 2010.
ISBN-13: 978-3-642-13623-8, doi: 10.1007/978-3-642-13624-5_11.
- [La47] Particle optimization with metamodel for crack characterization.
R. Douvenot, M. Lambert, D. Lesselier
in Proc. *URSI International Symposium on Electromagnetic Theory (EMTS 2010)*, 887-890, 2011.
E-ISBN: 978-1-4244-5154-8 [SEP] Print ISBN: 978-1-4244-5155-5, IEEE Conference Publications, doi: 10.1109/URSI-EMTS.2010.5637338

- [La48] Simulation-based optimization of the design and settings of ultrasonic phased-array transducers with an evolutionary algorithm
B. Puel, D. Lesselier, S. Chatillon, P. Calmon,
in *Review of Progress in Quantitative Nondestructive Evaluation* **30A/B**, 906-913, D. O. Thompson et D. E. Chimenti eds., American Institute of Physics, New York, 2011.
ISBN-13: 978-0-7354-0888-3. doi: 10.1063/1.359.1943
- [La49] Metamodels as input of an optimization algorithm for solving an inverse eddy current testing problem.
R. Douvenot, M. Lambert, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XIV)*, 71-78, T. Chady, S. Gratkowski, **T. Takagi** and **S.S. Udpā** eds, Studies in Applied Electromagnetics and Mechanics **35**, IOS Press, Amsterdam, 2011.
ISBN-13: 978-1-60750-749-9 (print), 978-1-60750-750-5 (online). doi: 10.3233/978-1-60750-750-5-71.
- [La50] MUSIC-type algorithm for eddy-current non-destructive evaluation of small defects in metal plates.
T. Henriksson, M. Lambert, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XIV)*, 22-29, T. Chady, S. Gratkowski, **T. Takagi** and **S.S. Udpā** eds, Studies in Applied Electromagnetics and Mechanics **35**, IOS Press, Amsterdam, 2011.
ISBN-13: 978-1-60750-749-9 (print), 978-1-60750-750-5 (online). doi: 10.3233/978-1-60750-750-5-22.
- [La51] On a novel computational scheme of dyadic Green's functions of electrically-uniaxial planar layered composites
Y. Zhong, X. Chen, M. Lambert, D. Lesselier
in *JSAEM Studies in Applied Electromagnetics and Mechanics* **14**, 125-126, G. Rubinacci, A. Tamburrino, F. Villone, et T. Takagi eds., Tokyo, 2011.
ISBN-13: 978-4-931455-19-1
- [La52] On a new stable modeling of the dyadic Green's functions of an electrically uniaxial planar layered medium and applications.
Y. Zhong, M. Lambert, D. Lesselier, X. Chen
Contribution invitée, in *IEEE Conferences Proc., 2011 International Conference on Electro-magnetics in Advanced Applications (ICEAA'11)*, 215-218, IEEE Xplore, 2011.
ISBN: 978-1-61284-977-5, IEEE Conference Publications, doi: 10.1109/ICEAA.2011.6046349
- [La53] Fast simulation method of multiple narrow cracks in planar stratified media.
R. Miorelli, C. Reboud, T. Theodoulidis, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XV)*, 11-18, B. P. C. Rao, T. Jayakumar, K. Balasubramanian, et B. Raj eds, Studies in Applied Electromagnetics and Mechanics **36**, IOS Press, Amsterdam, 2012.
ISBN: 978-1-60750-967-7 (print), 978-1-60750-968-4 (online). doi: 10.3233/978-1-60750-968-4-11
- [La54] BEM modeling for ECT simulation of complex narrow cracks in multilayered structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
in *Review of Progress in Quantitative Nondestructive Evaluation*, AIP Conference Proceedings **1511**, D. O. Thompson et D. E. Chimenti eds., 441-448, American Institute of Physics, New York, 2013.
ISBN: 978-0-7354-1129-6. doi:10.1063/1.4789081
- [La55] Comparison of two modeling approaches of eddy current industrial non-destructive testing of steel pipes.
A. Trillon, F. Deneuville, C. Reboud, F. Foucher, D. Lesselier, L. Maurice
in *Review of Progress in Quantitative Nondestructive Evaluation*, AIP Conference Proceedings **1581**, D. E. Chimenti, L. J. Bond, et D. O. Thompson eds., 1471-1474, American Institute of Physics, New York, 2014.
ISBN: 978-0-7354-1211-8. doi:10.1063/1.4864995

- [La56] ECT simulation of complex narrow cracks in planar multi-layered structures.
R. Miorelli, C. Reboud, D. Lesselier, N. Poulakis, T. Theodoulidis,
in *Electromagnetic Non-Destructive Evaluation (XVI)*, 103-110, J. M. A. Rebello, F. Kojima, T. Chady
eds, Studies in Applied Electromagnetics and Mechanics 38, IOS Press, Amsterdam, 2014.
ISBN: 978-1-61499-353-7 (print) | 978-1-61499-354-4 (online). doi: 10.3233/978-1-61499-354-4-103
- [La57] Fast calculation of electromagnetic scattering in anisotropic multilayers and its inverse problem.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XVIII)*, 151-158, Z. Chen, S. Xie and Y. Li eds,
Studies in Applied Electromagnetics and Mechanics, IOS Press, Amsterdam, 2015.
ISBN: 978-1-61499-508-1 (print) | 978-1-61499-509-8 (online). doi: 10.3233/978-1-61499-509-8-151
- [La58] A fast integral equation model with a dedicated Green's kernel for eddy-current inspection of fastener
holes in driver pickup mode.
K. Pipis, A. Skarlatos, D. Lesselier, T. Theodoulidis
in *41st Review of Progress in Quantitative Nondestructive Evaluation*, AIP Conference Proceedings,
1650, L. J. Bond et D. E. Chimenti eds., 477-483, American Institute of Physics, New York, 2015.
ISBN: 10.1063/1.4914641, doi: 10.1063/1.4914644
- [La59] MUSIC imaging method for low-high frequency inspection of composite multi-layers.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier
in *41st Review of Progress in Quantitative Nondestructive Evaluation*, AIP Conference Proceedings,
1650, L. J. Bond et D. E. Chimenti eds., 453-461, American Institute of Physics, New York, 2015
ISBN: 10.1063/1.4914641, doi: 10.1063/1.4914641
- [La60] On inverse scattering and imaging solutions for objects buried within uniaxially anisotropic media.
D. Lesselier, P.-P. Ding, G. Rodeghiero, M. Lambert, Y. Zhong
Contribution invitée, in *IEEE Conferences - 15th Mediterranean Microwave Symposium (MMS 2015)*, Lecce, Dec. 2015.
ISBN: 978-1-4673-7602-0, IEEE Conference Publications, doi: 10.1109/MMS.2015.7375424
(4pp), janv. 2016.
- [La61] A modified gradient descent reconstruction algorithm for breast cancer detection using microwave
radar and digital breast tomosynthesis.
M. Tivnan, C. Rappaport, M. Lambert, D. Lesselier
In Proc. *10th European Conference on Antennas and Propagation (EUCAP2016)*, Davos, avril 2016.
ISBN: 978-8-8907-0186-3, IEEE Conference Publications, doi: 10.1109/EuCAP.2016.7481582
(4 pp), juin 2016.
- [La62] Electromagnetic modeling of a periodic array of fibers embedded in a panel with multiple fibers
missing.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
in *Electromagnetic Non-Destructive Evaluation (XIX)*, pp. 149-156, N. Yusa, T. Uchimoto, et H.
Kikuchi eds, Studies in Applied Electromagnetics and Mechanics, Vol. 41, IOS Press, Amsterdam,
2016.
ISBN Print 978-1-61499-638-5, ISBN online 978-1-61499-639-2, doi: 10.3233/978-1-61499-639-2-149
- [La63] Impedance of an induction coil accounting for the end-effect in eddy current inspection of steam
generator tubes.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XIX)*, pp. 237-244, N. Yusa, T. Uchimoto, et H.
Kikuchi eds, Studies in Applied Electromagnetics and Mechanics, Vol. 41, IOS Press, Amsterdam,
2016.

ISBN Print 978-1-61499-638-5, ISBN online 978-1-61499-639-2, doi: 10.3233/978-1-61499-639-2-237

- [La64] Electromagnetic retrieval of missing fibers in periodic fibered laminates via sparsity concepts.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
in *Proc. 24th European Signal Processing Conference (EUSIPCO) 2016*, Budapest, 345-349 (TueC05)
ISBN 978-0-9928-6266-4, IEEE Conference Publications, doi: 10.1109/EUSIPCO.2016.7760267
- [La65] On the electromagnetic probing of man-made and natural buried structures
Contribution invitée, M. Serhir, M. Lambert, D. Lesselier, X. Ye
in *Proc. 2018 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2018)*, Chengdu, mai 2018.
ISBN 978-1-5386-2416-6, IEEE Conference Publications, doi: 10.1109/ICMMT.2018.8563966
(3 pp), déc. 2018.
- [La66] On the modeling and diagnosis of a micro-structured wire antenna system.
H. Tu, M. Serhir, P. Ran and D. Lesselier
in *Proc. 2018 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2018)*, Chengdu, mai 2018.
ISBN 978-1-5386-2416-6, IEEE Conference Publications, doi: 10.1109/ICMMT.2018.8563875
(3 pp), déc. 2018.
- [La67] Full-wave model of 3D scattering by a fibered laminate
C. Li, D. Lesselier, Y. Zhong, Z. Liu
in *Proc. 2018 International Conference on Microwave and Millimeter Wave Technology (ICMMT 2018)*, Chengdu, mai 2018.
ISBN 978-1-5386-2416-6, IEEE Conference Publications, 10.1109/ICMMT.2018.8563533
(3 pp), déc. 2018.
- [La68] Fast models dedicated to simulation of eddy current thermography.
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
in *Electromagnetic Non-Destructive Evaluation (XXI)*, pp. 175-182, D. Lesselier and C. Reboud eds, Studies in Applied Electromagnetics and Mechanics, Electronic Open Access, IOS Press, Amsterdam, 2018.
ISBN 978-1-61499-835-8 (print) | 978-1-61499-836-5 (online), doi: 10.3233/978-1-61499-836-5-175
- [La69] Fast simulation approach dedicated to infrared thermographic inspection of delaminated planar pieces
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
in *45th Review of Progress in Quantitative Nondestructive Evaluation*, AIP Conference Proceedings 2102, L. J. Bond, S. Holland, and S. Laflamme, eds., American Institute of Physics, New York, 120004, 2019.
ISBN: 978-0-7354-1832-5, doi: 10.1063/1.5099846
- [La70] Impact of root diameter and water content on tree roots detection using Ground Penetrating Radar.
A. Aboudourib, M. Serhir, D. Lesselier
in *Proc. 13th European Conference on Antennas and Propagation (EUCAP 2019), convened session: Theoretical, Algorithmic, and Experimental Advances in GPR*, Cracovie, mars-avril 2019.
ISBN 978-88-907018-8-7, IEEE Conference Publications, 8739825 (5 pp), juin 2019.
- [La71] Diagnostic within a dielectric micro-structure: time-reversal and sparsity-constrained imaging.
P. Ran, Z. Liu, D. Lesselier, M. Serhir
in *Proc. 13th European Conference on Antennas and Propagation (EUCAP 2019)*, Cracovie, mars-avril 2019.
ISBN 978-88-907018-8-7, IEEE Conference Publications 8740223 (5 pp), juin 2019.

- [La72] Electromagnetic imaging of a dielectric micro-structure via convolutional neural networks.
P. Ran, Y. Qin, D. Lesselier
in *Proc. 27th European Signal Processing Conference (EUSIPCO)*, A Coruña, sept. 2019.
ISBN 978-9-0827-9703-9, IEEE Conference Publications, doi:10.23919/EUSIPCO.2019.8903073
(5pp), nov. 2019.
- [La73] A wavelet-based contrast source inversion method.
Y. Zhang, M. Lambert, A. Fraysse, D. Lesselier
in *Proc. 2021 IEEE 19th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM)*, Winnipeg, août 2021.
<https://hal-centralesupelec.archives-ouvertes.fr/hal-03478788v1>
- [La74] Use of sparsity in nonlinear electromagnetic imaging: wavelet-based contrast source method
Y. Zhang, M. Lambert, A. Fraysse, D. Lesselier
in *Proc. 2021 XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS)*, Rome, août-sept. 2021.
<https://ieeexplore.ieee.org/document/9560576> (4 pp).
- [La75] On breast imaging from joint microwave and acoustic data within a Bayesian framework.
Y. Qin, T. Rodet, D. Lesselier
Contribution sollicitée, in *Proc. 16th European Conference on Antennas and Propagation (EUCAP 2022)*, Madrid, mars-avril 2022.
<https://ieeexplore.ieee.org/document/9769092> (5 pp), avril 2022.
- [La76] Breast imaging by cascaded CNN from joint microwave and ultrasonic data.
V. Noël, Y. Qin, T. Rodet, D. Lesselier
in Proc. 30th European Signal Processing Conference (EUSIPCO 2022), Belgrade, août-sept. 2022
ISBN 978-90-827970-9-1, IEEE Conf. Publ., pp. 917-921, oct. 2022.
<https://ieeexplore.ieee.org/document/9909650>
-
- Communications à des colloques avec actes et comité de lecture, objet d'actes « traditionnels »**
- [C1] Réflexion par des conducteurs inhomogènes. Détermination d'un profil de conductivité.
J.-C. Bolomey, Ch. Durix, D. Lesselier
Journées Nationales Microondes, Limoges, mars 1976.
Actes, 7B/2.
- [C2] Reconstruction of index profiles from simulated experimental data.
J.-C. Bolomey, Ch. Durix, D. Lesselier
URSI Symposium on Electromagnetic Wave Theory, San Francisco, juin 1977.
Actes, 151-153.
- [C3] Time domain reflection from inhomogeneous and dispersive slabs.
J.-C. Bolomey, D. Lesselier
IEEE AP-S Symposium and URSI Meeting, Washington DC., mai 1978.
AP Digest, 223-226.
- [C4] Numerical solution of Albert and Synge integral equation for perfectly conducting antennas.
J.-C. Bolomey, F. Hillaire, D. Lesselier
IEEE AP-S Symposium and URSI Meeting, Washington DC., mai 1978.
AP Digest, 126-130.
- [C5] Refractive index profile and target reconstruction, a time and spectral domain integral equation approach.
J.-C. Bolomey, D. Lesselier, C. Pichot, W. Tabbara

- Contribution invitée, IEEE AP-S Symposium and URSI Meeting, Seattle, juin 1979.
AP Digest, 251-254.
- [C6] Exact and approximated time domain deductive reconstruction of conducting multilayer slabs.
D. Lesselier
IEEE AP-S Symposium and URSI Meeting, Seattle, juin 1979.
AP Digest, 758-761.
- [C7] Current on thick cylindrical antennas. Improved solution of the generalized boundary condition integral equation by Le Foll's algorithm.
J.-C. Bolomey, S. El Habiby, F. Hillaire, D. Lesselier
IEEE AP-S Symposium and URSI Meeting, Seattle, juin 1979.
AP Digest, 663-666.
- [C8] Reconstruction déductive et optimisée de profils de conductivité et de permittivité à partir d'une formulation intégrale temporelle.
D. Lesselier
Colloque Optique Hertzienne et Diélectriques, Lille, juin 1979.
Actes, 52-55.
- [C9] Calcul de structures de couplage métalliques épaisses pour composants par l'équation d'Albert et Synge.
J.-C. Bolomey, S. El Habiby, F. Hillaire, D. Lesselier
Journées Nationales Microondes, Lille, juin 1979.
Actes, 80-81.
- [C10] Probing of plane and cylindrically stratified media. Biomedical and geophysical applications.
J. Audet, J.-C. Bolomey, B. Duchêne, D. Lesselier, C. Pichot, W. Tabbara
IEEE AP-S Symposium and URSI Meeting, Quebec, juin 1980.
URSI Digest, 144.
- [C11] Antennes épaisses de révolution: application au couplage des composants et aux capteurs large-bande.
J.-C. Bolomey, S. El Habiby, F. Hillaire, D. Lesselier
IEEE AP-S Symposium and URSI Meeting, Quebec, juin 1980.
URSI Digest, 152.
- [C12] Optimization theory and time-domain inverse scattering.
D. Lesselier
1980 International URSI Symposium on Electromagnetic Waves, Munich, août 1980.
Actes, 321 C1/C3.
- [C13] Practical solution to transient electromagnetic probing of stratified lossy media.
J.-C. Bolomey, D. Lesselier, G. Peronnet
IEEE AP-S Symposium and URSI Meeting, Los Angeles, juin 1981.
URSI Digest, 72.
- [C14] Physically motivated approximations in some inverse scattering problems.
J.-C. Bolomey, D. Lesselier, C. Pichot, W. Tabbara
Contribution invitée, XXth URSI General Assembly, Washington DC, août 1981.
Proc., 280.
- [C15] Experimental evaluation of a time domain optimal probing of inhomogeneous slabs.
D. Lesselier
IEEE AP-S Symposium and URSI Meeting, Albuquerque, mai 1982.
AP Digest, 668-670.

- [C16] Optimal probing of acoustic impedance profiles in time domain.
D. Lesselier
7th International Symposium on Ultrasonic Imaging and Tissue Characterization, Gaithersburg, juin 1982.
Ultrasonic Imaging, 4, 193.
- [C17] Faisabilité d'un diagnostic optimal de la lame inhomogène en régime temporel.
D. Lesselier
Journées Nationales Microondes, Toulouse, juin 1982.
Recueil JNM, Chap. Systèmes.
- [C18] Electromagnetic diagnostic of a stratified medium from borehole measurements.
F. Falchetti, D. Lesselier, W. Tabbara
IEEE AP-S Symposium and URSI Meeting, Houston, mai 1983.
AP Digest, 454-457.
- [C19] An approximate inverse scattering method for a magnetic dipole in a stratified medium.
F. Falchetti, D. Lesselier, W. Tabbara
1983 URSI International Symposium on Electromagnetic Theory, Saint-Jacques de Compostelle, août 1983.
Actes, 257-259.
- [C20] Application of the radiative transfer theory to the multiple scattering by low- and high-loss nonspherical particles.
A. Ishimaru, D. Lesselier, C. Yeh
IEEE AP-S Symposium and URSI Meeting, Boston, juin 1984.
URSI Digest, 101.
- [C21] Contribution to quantitative ultrasound tomography.
B. Duchêne, D. Lesselier, W. Tabbara
1984 IEEE Ultrasonics Symposium, Dallas, nov. 1984.
Proc., 2, 866-868
- [C22] Problèmes liés à la reconstruction d'images par tomographie microonde et ultrasonore. 1^o partie : Imagerie quantitative.
M. A. El Khalifa, C. Pichot, D. Lesselier, B. Duchêne
10^o Colloque Traitement du Signal et Applications (GRETSI), Nice, mai 1985.
Actes, 2, 763-768.
- [C23] Contribution à l'étude numérique d'un simulateur IEM de type strip-line.
D. Vuillet-Laurent, P. Lartigue, D. Lesselier
3^o Colloque National sur la Compatibilité Electromagnétique, Clermont-Ferrand, juin 1985.
Actes, A3-2, 1-5.
- [C24] Iterative techniques applied to some radiation and scattering problems.
F. Jouvie, D. Lesselier, D. Vuillet-Laurent
IEEE AP-S Symposium and URSI Meeting, Special Session on Error Minimization and Convergence in Numerical Methods, Vancouver, juin 1985.
URSI Digest, 103.
Invitation (D. Lesselier) au Panel de la Session.
- [C25] Tomographie par diffraction appliquée à la caractérisation d'objets enfouis.
B. Duchêne, D. Lesselier, W. Tabbara
7^o Journées d'Etudes sur la Propagation Acoustique (JESPA), Lyon, juin 1986.
Actes, XIII 5.1-5.5.

- [C26] Media characterization from boreholes. Comparison of approximate solutions.
D. Lesselier, H. Galan-Malaga, W. Tabbara
1986 URSI International Symposium on Electromagnetic Theory, Budapest, août 1986.
Actes, A, 350-352.
- [C27] Imaging of inhomogeneous media. Contribution to the feasibility of diffraction tomography.
B. Duchêne, D. Lesselier, W. Tabbara
1986 URSI International Symposium on Electromagnetic Theory, Budapest, août 1986.
Actes, A, 282-284.
- [C28] Imagerie microonde et ultrasonore : quelques résultats récents.
C. Pichot, L. Chommeloux, B. Duchêne, N. Joachimowicz, D. Lesselier, W. Tabbara,
J.-C. Bolomey
Contribution invitée, *III^o Symposium Nacional, Comite Espanol URSI*, sept. 1986.
Proc., 3-5.
- [C29] Imaging inhomogeneous fluid media by diffraction tomography. A comprehensive numerical and experimental investigation.
B. Duchêne, D. Lesselier, W. Tabbara
16th. International Symposium on Acoustical Imaging, Chicago, juin 1987.
- [C30] Contribution to the analysis of the inverse problems in boreholes.
H. Galan-Malaga, D. Lesselier, W. Tabbara
Contribution invitée, *European Congress on Simulation*, Prague, sept. 1987.
Proc., A, 163-167.
- [C31] Numerical analysis of the field radiated by a current loop in a borehole crossing a bed-boundary.
H. Galan-Malaga, D. Lesselier, W. Tabbara
1989 URSI International Symposium on Electromagnetic Theory, Stockholm, août 1989.
Actes, 120-122.
- [C32] Evaluation de diverses méthodes de diagnostic acoustique d'un fond marin stratifié.
R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
1er Congrès Français d'Acoustique, Lyon, avril 1990.
J. Phys., 51, 2 Suppl., C2-997 - C2-1000, 1990.
- [C33] Applying diffraction tomography to imaging of inhomogeneities in materials.
B. Duchêne, D. Lesselier, W. Tabbara
XXIIIth URSI General Assembly, Prague, août-sept. 1990.
Actes, 2, 403.
- [C34] Direct and inverse scattering by anomalies of speed and density in stratified fluid media.
B. Duchêne, D. Lesselier
IEEE 1990 Ultrasonics Symposium, Honolulu, déc. 1990.
Proc., 3, 1441-1445 & IEEE doi 10.1109/ULTSYM.1990.171603
- [C35] Computational methods for the eddy current imaging of anomalies in conductive materials.
D. Lesselier et B. Duchêne, R. Zorgati et F. Pons
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'91)*, Boston, juil. 1991.
Proc., 431.
- [C36] Caractérisation d'un sous-sol marin stratifié en situation de petits fonds par une méthode itérative.
M. Lambert, R. de Oliveira Bohbot, D. Lesselier
Colloque Acoustique Sous-Marine et Ultrasons, Cinquantenaire LMA, Marseille, juin 1991.
Publ. LMA, 125, 133-143.

- [C37] Probing of stratified media: physically- and mathematically-based approximations.
R. Bohbot, P. Grassin, X. Demoulin, M. Lambert, D. Lesselier, W. Tabbara
Contribution sollicitée, *13th World Congress on Computation and Applied Mathematics*, Dublin, Juil 1991.
Proc., 1, 477-478.
- [C38] Reconstruction des paramètres acoustiques d'un sous-sol marin stratifié à partir de son coefficient de réflexion.
M. Lambert, R. de Oliveira Bohbot, D. Lesselier,
2ème Congrès de la Société Française d'Acoustique, Bordeaux, avril 1992.
J. Phys. IV, Suppl. III, 4, C1-945 - C1-948, 1992.
- [C39] Scattering by a dielectric-coated conducting wedge. Asymptotic and hybrid techniques.
V. Gérard, D. Lesselier, F. Molinet, W. Tabbara
IEEE AP-S Symposium and URSI Meeting, Chicago, juil. 1992.
URSI Digest, 497.
- [C40] Approches asymptotique et hybride de la diffraction par un dièdre métallique recouvert de diélectrique.
V. Gérard et F. Molinet, D. Lesselier et W. Tabbara
Journées Internationales de Nice sur les Antennes, Nice, nov. 1992.
Actes, 513-516.
- [C41] On the acoustic probing of the sea bottom in shallow water from nearfield data.
M. Lambert, D. Lesselier
125th Meeting Acoustical Society of America, Ottawa, mai 1993.
J. Acoust. Soc. Am. , 93, 4 Pt.2, 2395, avril 1993.
- [C42] Eddy current imaging of defects in a conductive half-space. Diffraction tomographic and generalized solutions in a wavefield framework.
R. de Oliveira Bohbot, D. Lesselier et B. Duchêne, M. Nikolova et A. Djafari
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'93)*, Pasadena, juil. 1993.
Proc., 11.
- [C43] Simulated annealing as a computational tool for the characterization of defects in conductive materials.
R. de Oliveira Bohbot, D. Lesselier, B. Duchêne
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'93)*, Pasadena, juil. 1993.
Proc., 698.
- [C44] Détermination des profils acoustiques d'un fond marin de faible profondeur à partir du champ observé dans le chenal en présence d'une source donnée.
M. Lambert, D. Lesselier
3ème Congrès de la Société Française d'Acoustique, Toulouse, mai 1994.
J. Phys. IV, Suppl. III, 4, C5-1067 - C5-1070, 1994.
- [C45] A nonlinearized iterative approach of the eddy current characterization of voids in a conductive half-space.
R. E. Kleinman, D. Lesselier, B. Duchêne
Progress in Electromagnetics Research Symposium (PIERS'94), Noordwijk, juil. 1994.
Proc., 408 (version complète sur CD-ROM, B. Arbesser-Rastburg et al. eds, Kluwer, 4 p.).
- [C46] A nonlinearized iterative approach of the acoustic characterization of defects within a half space.
R. E. Kleinman, B. Duchêne, D. Lesselier
IEEE 1994 Ultrasonics Symposium, Cannes, nov. 1994.

Proc., vol. 2, 1169-1172 & IEEE doi 10.1109/ULTSYM.1994.401794

- [C47] Mapping 2-D defects in an attenuating half-space by successive regularized inversion in K-space of first-kind equations.
A. Litman, D. Lesselier, B. Duchêne
1995 URSI International Symposium on Electromagnetic Theory, Saint-Petersbourg, mai 1995
Actes, 142-144
(*A. Litman a été la récipiendaire d'une Récompense Jeune Scientifique de l'URSI.*)
- [C48] On modified gradient solution methods using the binary aspect of the unknown electromagnetic parameters and their application to the Ipswich data.
B. Duchêne, D. Lesselier
Contribution invitée, *IEEE AP-S Symposium and URSI Meeting*, Newport Beach, juin 1995.
URSI Digest, 235.
- [C49] Eddy current nondestructive mapping of voids in a metal tube. Towards a full solution.
V. Monebhurrun, D. Lesselier, B. Duchêne
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'95)*, Seattle, juil. 1995.
Proc., 824.
- [C50] On the 3-D eddy current nondestructive testing of metal tubes.
V. Monebhurrun, B. Duchêne et D. Lesselier, R. Zorgati
3rd International Workshop on Electric and Magnetic Fields, Liège, mai 1996.
Proc., 465-470.
- [C51] On the possible enhancement by total variation and other constraints of the modified gradient method for inversion of 2-D objects in a half-space.
G. Avez, B. Duchêne, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'96)*, Innsbrück, juil. 1996.
Proc., 356.
- [C52] Nonlinearized inversion of 2-D objects in a stratified embedding: the TE case.
M. Lambert, B. Duchêne, D. Lesselier
Progress in Electromagnetics Research Symposium (PIERS'96), Innsbrück, juil. 1996.
Proc., 280.
- [C53] Inversion of the 1996 Ipswich Data using binary specializations of modified gradient methods.
B. Duchêne et D. Lesselier, R. E. Kleinman
Contribution invitée, *IEEE AP-S Symposium and URSI Meeting*, Baltimore, juil. 1996.
URSI Digest, 82.
- [C54] 3-D eddy current nondestructive testing of steam generator tubes using a volume integral formulation.
V. Monebhurrun, B. Duchêne, D. Lesselier
XXVth URSI General Assembly, Lille, sept. 1996.
Actes, 73.
(*V. Monebhurrun a été le récipiendaire d'une Récompense Jeune Scientifique de l'URSI.*)
- [C55] A level-set approach to inversion of binary objects.
A. Litman et D. Lesselier, F. Santosa
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'97)*, Cambridge, juil. 1997.
Proc., 37.
- [C56] Modified gradient methods applied to the Ipswich real data.

- B. Duchêne, D. Lesselier
Contribution invitée, IEEE AP-S Symposium and URSI Meeting, Montréal, juil. 1997.
URSI Digest, 160.
- [C57] Scattering by an obstacle in a waveguide.
T. S. Angell et R. E. Kleinman, D. Lesselier
1998 National Radio Science Meeting, Boulder, janv. 1998.
Proc., 241.
- [C58] On novel inversion methods of diffusive and propagative wavefields in the spectral and spatial domain with emphasis on the reconstruction of buried obstacles.
A. Litman et D. Lesselier
Contribution invitée, PICOF'98, Conference on Inverse Problems, Control and Shape Optimization, ENIT-INRIA, Carthage, avril 1998.
Actes, 71-78.
- [C59] Topological identification in electromagnetic wavefield inversion.
J.-P. Zolésio, A. Litman et D. Lesselier
IABEM 98: International Symposium on Boundary Elements Methods, Palaiseau, mai 1998.
Actes, 209-210.
- [C60] On the identification of a simple conductive body buried in a conductive earth at low frequencies.
G. Perrusson, M. Lambert, D. Lesselier et B. Duchêne, G. Dassios et G. Kamvyssas
1998 URSI International Symposium on Electromagnetic Theory, Salonique, mai 1998.
Actes, 575-577.
- [C61] Electromagnetic scattering by a tri-axial homogeneous penetrable ellipsoid: low-frequency analytical derivation and numerical testing of the localized nonlinear approximation.
G. Perrusson, M. Lambert et D. Lesselier, A. Charalambopoulos et G. Dassios
1998 URSI International Symposium on Electromagnetic Theory, Salonique, mai 1998.
Actes, 408-410.
(*G. Perrusson a été récipiendaire d'une Récompense Jeune Scientifique de l'URSI.*)
- [C62] Inversion of binary objects at eddy current frequencies in a wavefield framework. Application to the nondestructive evaluation of conductive plates and tubes.
V. Monebhurrun, A. Litman, D. Lesselier, B. Duchêne
Contribution invitée, 1998 URSI International Symposium on Electromagnetic Theory, Salonique, mai 1998.
Actes, 766-768.
- [C63] The optimal reconstruction of a buried obstacle by nonlinearized algorithms.
M. Lambert, A. Litman, B. Duchêne, D. Lesselier
Contribution invitée, EUROEM'98, Tel Aviv, juin 1998.
Actes.
- [C64] On the characterization of a conductive body in a conductive earth using low-frequency asymptotic analyses.
G. Perrusson, M. Lambert, D. Lesselier et B. Duchêne, A. Charalambopoulos, G. Dassios et G. Kamvyssas, B. Bourgeois
Contribution invitée, Progress in Electromagnetics Research Symposium (PIERS'98), Nantes, juil. 1998.
Actes, 867.
- [C65] Inverse scattering for 2-D buried targets: comparison of the TE- and TM-cases.
M. Lambert, B. Duchêne, D. Lesselier

- Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'98)*, Nantes, juil. 1998.
Actes, 449.
- [C66] On the retrieval of Simplified Objects in wavefield inversion.
R. E. Kleinman, D. Lesselier, A. Virgin
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'98)*, Nantes, juil. 1998.
Actes, 174.
- [C67] Eddy current nondestructive evaluation using SQUIDs: from theory to laboratory-controlled experiments.
D. Lesselier, A. Ruosi
Contribution invitée, *International Conference on Inverse Problems*, Vietri sul Mare, sept.-oct. 1998.
Actes, 10-11.
- [C68] Probing conductive masses in the diffusive regime: equivalent sources and bodies.
G. Perrusson, B. Bourgeois, D. Lesselier, M. Lambert, B. Duchêne
61st European Association of Geoscientists & Engineers (EAGE) Conference, Helsinki, juin 1999.
Actes, P-93 (2 pp.).
- [C69] The localized non-linear approximation: a good recipe for low-contrast ellipsoidal bodies.
G. Perrusson, A. Charalambopoulos, B. Bourgeois, D. Lesselier, M. Lambert, G. Dassios
61st European Association of Geoscientists & Engineers (EAGE) Conference, Helsinki, juin 1999.
Actes, 2-10 (2 pp.).
- [C70] On some computational issues in nonlinearized wavefield inversion.
M. Lambert, D. Lesselier
Contribution invitée, *Computational Inverse Problems Mini-Symposium, The Fourth International Congress on Industrial and Applied Mathematics (ICIAM'99)*, Edinburgh, juil. 1999.
Actes, 137.
- [C71] Modelization of the electromagnetic behavior of multilayer carbone-epoxy materials.
D. Martinez, M. Lemestre, M. Lambert, D. Lesselier
12th International Conference on Composite Materials (ICCM-12), Paris, juil. 1999.
Actes, CD-ROM (6 pp.)
- [C72] Inverse scattering and specialized modified gradient methods.
B. Duchêne, D. Lesselier
Contribution invitée, *IEEE AP-S Symposium and USNC/URSI Meeting*, Orlando, juil. 1999
Actes USNC/URSI, 165.
- [C73] High Tc SQUID and eddy current NDE: a comprehensive investigation from real data to modeling and vice versa.
A. Ruosi et M. Valentino, V. Monebhurrun, V. Bertrand, D. Lesselier et B. Duchêne
Contribution invitée, *XXVIth URSI General Assembly*, Toronto, août 1999.
Actes, 121.
- [C74] The retrieval of a buried cylindrical obstacle by constrained modified gradient methods: the H-polarization case.
M. Lambert, D. Lesselier
Contribution invitée, *XXVIth URSI General Assembly*, Toronto, août 1999.
Actes, 125
- [C75] The identification of conductive masses in the earth. Theory, numerical modeling and inversion of real data at induction frequencies.

G. Perrusson, D. Lesselier, M. Lambert et B. Duchêne, B. Bourgeois, A. Charalambopoulos, G. Kamvyssas et G. Dassios
XXVIth URSI General Assembly, Toronto, août 1999.
Actes, 407.

- [C76] Boundary shape reconstruction of obstacles from laboratory-controlled data at microwave frequencies.
C. Ramananjaona, M. Lambert, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'2000)*, Cambridge, juil. 2000.
Actes, 113
- [C77] On the use of contrast-source dyadic integral formulations for the modeling of eddy current non-destructive evaluation.
D. Dos Reis, M. Lambert, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'2000)*, Cambridge, juil. 2000.
Actes, 152
- [C78] On the controlled evolution of level sets and its application to the retrieval of obstacles from microwave laboratory data.
C. Ramananjaona, M. Lambert et D. Lesselier, J.-P. Zolésio
Contribution invitée, *European Microwave Week, Microwave Imaging Methods and Techniques*, Paris, oct. 2000.
Actes, 19-26
- [C79] A short tour of nonlinearized inversion methods.
M. Lambert, D. Lesselier
Contribution invitée, *Kleinheubacher Tagung*, URSI Allemagne, Kleinheubach, sept. 2000.
Actes (Kleinhaubacher Berichte, Band 44, Technologiezentrum T-Nova DeutscheTelekom), 418-424
- [C80] On novel developments of the controlled evolution of level sets in the field of inverse shape problems.
C. Ramananjaona, M. Lambert, D. Lesselier, J.-P. Zolésio
2001 URSI International Symposium on Electromagnetic Theory, Victoria, mai 2001.
Proc., 459-461.
- [C81] Extended Born domain integral models of diffusive fields.
D. Dos Reis, M. Lambert, D. Lesselier
13th Conference on the Computation of Electromagnetic Fields (COMPUMAG), Evian, juil. 2001.
Proc., IV-74-75.
- [C82] Low-frequency electromagnetic modeling and retrieval of simple orebodies in a conductive Earth.
G. Perrusson et D. Lesselier, P. Vafeas, G. Kamvyssas et G. Dassios.
3rd Congress of the International Society for Analysis, its Applications and Computation (ISAAC), Berlin, août 2001.
Proc., 221-222
- [C83] On mathematical and computational issues in the electromagnetic inversion (TE mode) of buried objects by controlled evolutions of level sets.
C. Ramananjaona, M. Lambert et D. Lesselier, J.-P. Zolésio
3rd Congress of the International Society for Analysis, its Applications and Computation (ISAAC), Berlin, août 2001.
Proc., 225.
- [C84] Inversion of 2-D buried scatterers by controlled evolution of level sets: state-of-art and perspectives.
C. Ramananjaona, M. Lambert, D. Lesselier

- Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'2002)*, Cambridge, juil. 2002.
Proc., 234.
- [C85] Low frequency models and characterization of an ellipsoidal body in the context of Earth's exploration.
G. Perrusson et D. Lesselier, P. Vafeas et G. Dassios.
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS'2002)*, Cambridge, juil. 2002.
Proc., 337.
- [C86] Non-linearized and Born-extended inversion of multi-D objects.
M. Lambert, D. Lesselier
Contribution invitée, *The First International Conference Inverse Problems: Modeling and Simulation*, Fethiye, juil. 2002.
Abstracts, 109-110.
- [C87] Diffusive and propagative wavefield inversion with emphasis on nondestructive evaluation of man-made and natural objects.
D. Lesselier, D. Dos Reis, B. Duchêne, M. Lambert, G. Perrusson, C. Ramananjaona
Contribution invitée, *XXVIIth URSI General Assembly*, Maastricht, août 2002.
CD-ROM 4 pp.
- [C88] Nonlinearized inversion of buried scatterers: fast marching, topology-free solution methods.
C. Ramananjaona, J.-P. Zolésio, M. Lambert, D. Lesselier
Contribution invitée, *Journées Internationales de Nice sur les Antennes, Mini-Symposium on Inverse Scattering*, Nice, nov. 2002.
Proc. V2, 13-18
- [C89] Applied mathematics and wavefield inversion: combining physical insight and simple theoretical machineries.
M. Lambert, D. Lesselier, A. Wirgin
Contribution invitée, *5th World Congress on Ultrasonics*, Paris, sept. 2003.
Proc., 617-624, CD-ROM.
- [C90] On some recent advances in the nonlinearized inversion of scattered fields.
A. Baussard, M. Lambert, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2004)*, Pise, mars 2004.
Proc., CD-ROM.
- [C91] Low-frequency modeling of the interaction of magnetic dipoles and ellipsoidal bodies in a conductive medium.
G. Perrusson, P. Vafeas, D. Lesselier,
URSI International Symposium on Electromagnetic Waves, Pise, mai 2004.
Proc., 1017-1019 (+ CD-ROM)
- [C92] Adaptive multiscale approach for 2-D tomography.
A. Baussard E. L. Miller, D. Lesselier
URSI International Symposium on Electromagnetic Waves, Pise, mai 2004.
Proc., 1092-1094 (+ CD-ROM)
- [C93] Application of volumetric and surface defect models for the analysis of eddy current nondestructive testing problems.
J. Pavo, D. Prémel, D. Lesselier
URSI International Symposium on Electromagnetic Waves, Pise, mai 2004.
Proc., 400-402 (+ CD-ROM)

- [C94] Développement et validation d'un outil de simulation dédié au contrôle non destructif par courants de Foucault de tubes en fabrication.
C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
Journées COnfédération FRançaise des Essais Non Destructifs (COFREND), Beaune, mai 2005.
Proc., CD-ROM
- [C95] Modélisation courants de Foucault de défauts plans.
L. Maurice, D. Prémel, G. Pichenot, A. Nicolas, D. Lesselier, J. Pavo
Journées COnfédération FRançaise des Essais Non Destructifs (COFREND), Beaune, mai 2005.
Proc., CD-ROM
- [C96] Asymptotic field formulations, MUSIC-type retrievals of small 3-D bounded dielectric and/or magnetic inclusions, and their application to dipole source and receiver arrays.
H. Ammari, E. Iakovleva, D. Lesselier, G. Perrusson
Contribution invitée, *2005 Applied Inverse Problems International Conference*, Cirencester, juin 2005.
- [C97] Calculation of eddy current testing probe signal with global approximation.
J. Pavo et D. Lesselier
15th Conference on the Computation of Electromagnetic Fields (COMPUMAG), Shenyang, juin 2005.
Proc., vol. 3, 94-95.
- [C98] Development and validation of a 3D model dedicated to eddy current non-destructive testing of tubes by encircling probes.
C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
International Symposium on Applied Electromagnetics and Mechanics (ISEM 2005), Bad Gastein, sept. 2005.
Proc., 278-279.
- [C99] On the calculation of ECT signals due to thin cracks in a plate using a global approximation of the dipole density.
J. Pavo, L. Maurice, D. Prémel, D. Lesselier
International Symposium on Applied Electromagnetics and Mechanics (ISEM 2005), Bad Gastein, sept. 2005.
Proc., 292-293.
- [C100] On the retrieval of small electromagnetic 3-D scatterers via MUSIC.
E. Iakovleva, D. Lesselier, et G. Perrusson, H. Ammari
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS) 2006*, Cambridge, mars 2006.
Proc. CD-ROM
- [C101] On the low-frequency modeling of coupled obstacles buried in Earth-like medium
A. Bréard, G. Perrusson, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS) 2006*, Cambridge, mars 2006.
Proc. CD-ROM
- [C102] 3-D electromagnetics, asymptotic models and MUSIC-type imaging of a collection of small scatterers.
E. Iakovleva, D. Lesselier, et G. Perrusson, H. Ammari
Contribution invitée, *3rd International Conference on Inverse Problems, Control and Shape Optimization (PICOF'06)*, Nice, avril 2006.
Proc., 13-18
- [C103] New discretisation scheme based on splines for Volume Integral Method: application to eddy current testing of tubes.

C. Reboud, D. Prémel, D. Lesselier, B. Bisiaux

7th International Symposium on Electric and Magnetic Fields (EMF 2006), Aussois, juin 2006.
Proc., 97-98

[C104] Hybridization of volumetric and surface models for the T/R EC probe response due to a thin opening.

L. Maurice, D. Prémel, J. Pavo, D. Lesselier, A. Nicolas

7th International Symposium on Electric and Magnetic Fields (EMF 2006), Aussois, juin 2006.
Proc., 93-94

[C105] Synergistic exploitation of divide and conquer strategies for inverse scattering problems.

M. Benedetti, D. Franceschini, M. Lambert, D. Lesselier, A. Massa

Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2006)*, Tokyo, août 2006.

Proc., CD-ROM.

[C106] Simulation of 3D eddy current testing configurations of tubes using encircling and sectorial external probes: Developments and experimental validations

B. Bisiaux, C. Reboud, D. Prémel, D. Lesselier

9th European Conference on Non-Destructive Testing (ECNDT 2006), Berlin, sept. 2006.

Proc., CD-ROM

[C107] On the evolution of level sets and inverse scattering, and its extension to the recovery of thin shapes.

O. Dorn, D. Lesselier

Contribution invitée, *VI Mediterranean Microwave Symposium (MMS'2006)*, Gênes, sept. 2006.

Proc., CD-ROM, 411-414.

[C108] MUSIC-type retrieval of 3-D inclusions in a half space from asymptotic field formulations.

E. Iakovleva, S. Gdoura, D. Lesselier, G. Perrusson

5ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'06, Lille, nov. 2006.

Proc., CD-ROM & 73-74

[C109] On the calculation of the dyadic Green's function for an electrically uniaxial planar composite layering.

S. Ossandon, M. Lambert, D. Lesselier

5ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'06, Lille, nov. 2006.

Proc., CD-ROM & 179-180

[C110] Remote Field Effect modeling via an integral equation approach.

A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne

5ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'06, Lille, nov. 2006.

Proc., CD-ROM & 139-140

[C111] On the MUSIC-type electromagnetic imaging of a small collection of 3-D dielectric spheres from its Multi-Static Response using exact and asymptotic numerical data.

E. Iakovleva, D. Lesselier

Contribution invitée, *23rd Review of Progress in Applied Computational Electromagnetics (ACES'07)*, Vérone, mars 2007

Proc., CD-ROM, 1242-1246.

[C112] Low-frequency modeling of 3-D coupled obstacles and inversion by differential evolution.

A. Breard, G. Perrusson, D. Lesselier,

Contribution invitée, *23rd Review of Progress in Applied Computational Electromagnetics (ACES'07)*, Vérone, mars 2007

Proc. CD-ROM, 661-666.

- [C113] Electromagnetic interactions with an electrically uniaxial composite layering.
S. Ossandon, M. Lambert, D. Lesselier,
23rd Review of Progress in Applied Computational Electromagnetics (ACES'07), Vérone, mars 2007
Proc. CD-ROM, 707-712.
- [C114] Biomedical qualitative imaging by means of a two-step inverse scattering method.
M. Benedetti, M. Donelli, D. Lesselier, A. Massa
Progress in Electromagnetics Research Symposium (PIERS 2008), Hangzhou, mars 2008.
Proc., 548, CD-ROM
- [C115] Qualitative microwave subsurface imaging by means of a multi-resolution multi-region level set method.
M. Benedetti, D. Lesselier, L. Poli, A. Massa
Progress in Electromagnetics Research Symposium (PIERS 2008), Hangzhou, mars 2008.
Proc., 716, CD-ROM
- [C116] Modélisation de contrôle par courants de Foucault de tubes ferromagnétiques.
A. Skarlatos, G. Pichenot, D. Lesselier, B. Duchêne, M. Lambert
Journées de la Confédération Française pour les Essais Non Destructifs (COFREND), Toulouse, mai 2008.
Actes sur CD-ROM, 8 pp.
- [C117] Retrieval of an unknown number of buried spheres by differential evolution with multi-resolution multi-zone features
A. Bréard, G. Perrusson, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2008)*, Cambridge, juillet 2008.
Proc., CD-ROM.
- [C118] MUSIC-type imaging of a small dielectric sphere buried in a half-space from exact and asymptotic data.
S. Gdoura, D. Lesselier, P. C. Chaumet, G. Perrusson
XXIXth URSI General Assembly, Chicago, août 2008.
Proc., 4 pp. CD-ROM
(*S. Gdoura a été la récipiendaire d'une Récompense Jeune Scientifique de l'URSI.*)
- [C119] Adaptive database for eddy-current testing in metal tubes.
G. Franceschini, M. Lambert, D. Lesselier
8th International Symposium on Electric and Magnetic Fields (EMF 2009), Mondovi, mai 2009.
Proc., 2 pp. CD-ROM
- [C120] Simulation-based optimization of the design and settings of ultrasonic phased-array transducers with an evolutionary algorithm.
B. Puel, S. Chatillon, P. Calmon, D. Lesselier
Review of Progress in Quantitative Nondestructive Evaluation, San Diego, juil. 2010.
Proc. CD-ROM, 4 pp.
- [C121] Low-frequency electromagnetic scattering by two PEC spheres buried in conductive medium.
P. Vafeas, P. K. Papadopoulos, D. Lesselier
Progress in Electromagnetics Research Symposium (PIERS 2011), Marrakesh, mars 2011.
Proc. 256, CD-ROM et pdf téléchargeable sur PIERS
- [C122] Fast imaging of void defects in conductive half-space.
T. Henriksson, M. Lambert, D. Lesselier
Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2011)*, Marrakesh,

mars 2011.

Proc. 368, CD-ROM et pdf téléchargeable sur PIERS

- [C123] Semi-analytical simulation of eddy current testing signals due to narrow cracks embedded in a multilayered planar medium.

R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis

Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2011)*, Marrakesh, mars 2011.

Proc. 369, CD-ROM et pdf téléchargeable sur PIERS.

- [C124] Modélisation du contrôle par courants de Foucault d'entailles de très faibles ouvertures.

R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis

Journées COFREND Dunkerque 2011

Proc., CD-ROM

- [C125] 3D modelling of electromagnetic time reversal: localization of a dielectric object in a half-space.

M. Benhamouche, L. Bernard, L. Pichon, D. Lesselier

NCMIP 2011, *First International Workshop on New Computational Methods for Inverse Problems*, Cachan, mai 2011.

Proc., ACM Digital Library, 5 pp

- [C126] 3D Generalized Finite-Difference modeling of time reversal for localization of dielectric obstacles — the impact of transceiver array density.

M. Benhamouche, L. Bernard, L. Pichon, D. Lesselier

COMPUMAG 2011, Sydney, juil. 2011

Proc., 2 pp.

- [C127] Non-iterative electromagnetic imaging of perfectly conducting screens from limited range farfield data.

W.-K. Park, D. Lesselier

International Symposium on Antennas and Propagation (ISAP 2011), Jeju, oct. 2011.

Proc., no. WeF2-3 C05_1001, 4pp.

- [C128] Performances of differential evolution to optimize ultrasonic arrays transducers.

B. Puel, D. Lesselier, P. Calmon, S. Chatillon,

Contribution invitée, *NDE 2011*, Chennai, nov. 2011

Proc. CD-ROM, 6 pp.

- [C129] On the electromagnetic response of anisotropic laminates.

Y. Zhong, X. Chen, M. Lambert, D. Lesselier

Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2012)*, Kuala Lumpur, mars 2012.

Proc. 36, CD-ROM et pdf téléchargeable sur PIERS

- [C130] Transient wave imaging of small scatterers in electromagnetics.

S. Gdoura, D. Lesselier

7ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'12, Marseille, juil. 2012.

Proc., 64-65

- [C131] Localisation de cibles métalliques par retournement temporel d'ondes électromagnétiques – étude numérique 3-D et expérimentale.

M. Benhamouche, M. Sehrir, L. Bernard, L. Pichon, D. Lesselier

7ème Conférence Européenne sur les Méthodes Numériques en Electromagnétisme, NUMELEC'12, Marseille, juil. 2012.

Proc., 52-53

- [C132] An efficient interpolation for calculation of the response of composite layered material and its implementation in MUSIC imaging.
G. Rodeghiero, Y. Zhong, D. Lesselier, M. Lambert, X. Chen
19th Conference on the Computation of Electromagnetic Fields (COMPUMAG 2013), Budapest, juil. 2013.
Proc. (USB key), pc5-11 (2 pp)
- [C133] Wide-band electromagnetic time reversal: selecting the instant of focus for scatterer localization.
M. Benhamouche, L. Bernard, M. Sehrir, L. Pichon, D. Lesselier
19th Conference on the Computation of Electromagnetic Fields (COMPUMAG 2013), Budapest, juil. 2013.
Proc. (USB key), oa2-1 (2 pp)
- [C134] Eddy-current inspection modelling of a thin crack located in the vicinity of a fastener borehole.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
The 30th International Review of Progress in Applied Computational Electromagnetics (ACES 2014 Conference), Jacksonville, mars 2014.
- [C135] Electromagnetic small-scale modeling of composite panels involving periodic arrays of circular fibers.
C. Li, D. Lesselier, Y. Zhong
META'14, the 5th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Singapore, mai 2014.
- [C136] Contrôle électromagnétique de structures multicouches anisotropes et la méthode MUSIC.
G. Rodeghiero, Y. Zhong, M. Lambert, D. Lesselier
Journées COnfédération FRançaise des Essais Non Destructifs (COFREND), COFREND Days, Bordeaux, mai 2014.
On-line, site COFREND
(*G. Rodeghiero a reçu, avec son poster journée des doctorants, le prix Claude Birac, en troisième prix.*)
- [C137] Calcul de la variation de l'impédance d'une bobine due à un défaut avec alésage à partir d'une formulation modale.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
Journées COnfédération FRançaise des Essais Non Destructifs (COFREND), Bordeaux, mai 2014.
- [C138] Low-high frequency inspection of composite multi-layers and MUSIC-type electromagnetic imaging.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier
Inverse Problems from Theory to Applications Conference (IPTA 2014), Bristol, août 2014.
- [C139] Electromagnetic MUSIC imaging and 3-D retrieval of defects in anisotropic, multi-layered composite materials.
G. Rodeghiero, M. Lambert, D. Lesselier, and P.-P. Ding
Contribution invitée, *The 9th International Conference on Computational Physics (ICCP9)*, Singapore, janv. 2015.
Proc. paper A05-05
- [C140] Fast calculation of scattering problem in layered uniaxial media.
Y. Zhong, X. Chen, P.-P. Ding, M. Lambert, D. Lesselier
The 9th International Conference on Computational Physics (ICCP9), Singapore, janv. 2015.
Proc. paper B11-05
- [C141] Full-wave model and numerical study of electromagnetic plane-wave scattering by multilayered, fiber-based periodic composites.
C. Li, D. Lesselier, Y. Zhong

*1st URSI Atlantic Radio Science Conference (URSI AT-RASC), Gran Canaria, mai 2015.
(C. Li fut sélectionné parmi les 10 contributeurs de la compétition étudiante orale, et y reçut le troisième prix.)*

- [C142] Subspace-based optimization method for reconstructing 3-D scatterers in anisotropic laminates.
P.-P. Ding, M. Lambert, D. Lesselier
Contribution invitée, 20th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE 2015), Sendai, sept. 2015.
Proc. paper OS4-3, pp. 53-54.
- [C143] Development of methods for characterizing defects based on TFM multimode imaging.
K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy
15th Anglo-French Physical Acoustics Conference (AFPAC 2016), Croydon, janv. 2016.
Proc. 34-35.
- [C144] Modeling of periodically-structured fiber-reinforced laminates with multiple fibers absent.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
META'16, 7th International Conference on Metamaterials, Photonic Crystals and Plasmonics, Malaga, juil. 2016.
- [C145] Electromagnetic near-field imaging of missing fibers in periodic fiber-reinforced laminates.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
Contribution invitée, Progress in Electromagnetics Research Symposium (PIERS 2016), Shanghai, août 2016.
IEEE Conferences Publication, doi: 10.1109/PIERS.2016.7735485
- [C146] On recent advances in modeling and electromagnetic imaging of perturbed composite laminates
D. Lesselier, M. Lambert
Contribution invitée - Keynote, Progress in Electromagnetics Research Symposium (PIERS 2016), Shanghai, août 2016.
IEEE Conferences Publication, doi: 10.1109/PIERS.2016.7734271
- [C147] On the radiation of antennas within a subwavelength-separated wire distribution, super-localization and time-reversal
H. Tu, S. Xiao, D. Lesselier, M. Serhir
Progress in Electromagnetics Research Symposium (PIERS 2016), Shanghai, août 2016.
IEEE Conferences Publication, doi: 10.1109/PIERS.2016.7735486
- [C148] A new optimization method for solving electromagnetic inverse scattering problems.
Y. Zhong, D. Lesselier, M. Lambert
Progress in Electromagnetics Research Symposium (PIERS 2016), Shanghai, août 2016.
doi: 10.1109/PIERS.2016.7734526
- [C149] From small-scale modeling to imaging of disorganized periodic structures (link is external)
Z. Liu, C. Li, D. Lesselier, Y. Zhong
21st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2016), Lisbonne, sept. 2016.
Proc. 2pp.
- [C150] On a Bayesian inversion approach in eddy-current testing.
C. Cai, M. Lambert, T. Rodet, D. Lesselier
21st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2016), Lisbonne, sept. 2016.
Proc. 60-61.
- [C151] Electromagnetic non-destructive testing of damaged fibered-reinforced composite laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong

Journées COnfédération FRançaise des Essais Non Destructifs (COFREND) - COFREND Days,
Strasbourg, mai 2017.

- [C152] Caractérisation de défauts plans en bordure de soudure par imagerie TFM sélective.

K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy

Journées COnfédération FRançaise des Essais Non Destructifs (COFREND) - COFREND Days,
Strasbourg, mai 2017.

- [C153] Electromagnetic modeling and imaging of damaged layered fiber-based laminates.

Z. Liu, D. Lesselier, C. Li, Y. Zhong

2017 International Applied Computational Electromagnetics Society Symposium in China (ACES-China 2017), Suzhou, août 2017

- [C154] Computational modeling and imaging of damaged fibered laminates from low frequency to resonance.

Z. Liu, C. Li, D. Lesselier, Y. Zhong

22st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2017), Saclay, sept. 2017.

- [C155] Nonlinear imaging of 3D defect in anisotropic laminate using joint sparsity constraints.

H. Zaimaga, A. Fraysse, M. Lambert, D. Lesselier

18th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2017), Chamonix, sept. 2017.

- [C156] Electromagnetically locating damages in layered fiber-reinforced periodic laminates with a joint-sparsity-based method.

Z. Liu, D. Lesselier, Y. Zhong

Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2017)*, Singapour, nov. 2017.

- [C157] Semi-analytical modelling of induction thermography for inspection of delaminated planar pieces

A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier

23th International Workshop on Electromagnetic Non-Destructive Evaluation, Detroit, sept. 2018.

- [C158] Computational imaging of micro-structured media at small scale - from one-shot first-order solutions to full-wave iterative ones.

Z. Liu, P. Ran, Y. Zhong, M. Serhir, and D. Lesselier

Speaker invité (D. Lesselier) (*tutorial*) *Workshop on Qualitative and Quantitative Approaches to Inverse Scattering Problems*, Institute for Mathematical Sciences, National University of Singapore, Singapour, sept. 2018

- [C159] Retrieving missing elements of a 2-D micro-structure: joint-sparsity inversion and convolutional neural networks.

P. Ran, Y. Qin, D. Lesselier, M. Serhir

9th International Conference on New Computational Methods for Inverse Problems, Cachan, mai 2019.

- [C160] Statistical analysis of indoor human exposure based on resampled polynomial chaos expansion.

Z. Liu, D. Lesselier, B. Sudret, J. Wiart

3rd International Conference on Uncertainty Quantification in Computational Sciences and Engineering (UNCECOMP 2019), Heraklion, juin 2019.

- [C161] Model-based source optimisation for eddy-current thermography in planar specimens using meta-modelling.

R. Miorelli, A. Skarlatos, C. Reboud, A. Ratsakou, D. Lesselier

22nd International Conference on the Computation of Electromagnetic Fields, International Compumag Society, Paris, juil. 2019.

- [C162] Adaptive TFM imaging in anisotropic steels using optimization algorithms coupled to a surrogate model.
C. Ménard, S. Robert, P. Calmon, D. Lesselier
46th Annual Review of Progress in Quantitative Nondestructive Evaluation, Portland, juil. 2019.
- [C163] Fast 3D model dedicated to thermographic inspections of planar composite structures.
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
The 24th International Workshop on Electromagnetic Nondestructive Evaluation, Chengdu, sept. 2019.
- [C164] A mixed strategy for efficient acousto-electric tomography based on complete electrode model.
C. Li, K. An, K. Zheng, D. Lesselier
The 24th International Workshop on Electromagnetic Nondestructive Evaluation, Chengdu, sept. 2019.
- [C165] On the Direct Sampling Method in 3-D far-field inverse scattering, from theory to testing on controlled laboratory data
S. Kang, M. Lambert, D. Lesselier
19th International Symposium on Applied Electromagnetics and Mechanics, Nanjing, sept. 2019.
Présentation non donnée
- [C166] 3D reconstruction of tree roots under heterogeneous soil conditions using Ground Penetrating Radar
A. Aboudourib, M. Serhir, D. Lesselier
Near Surface Geoscience Conference 2019, EAGE, The Hague, sept. 2019.
- [C167] Near-field characterization of root systems, from computational modeling and simulations to controlled laboratory experiments.
A. Aboudourib, M. Serhir, D. Lesselier
Contribution invitée, *PIERS PhotonIcs & Electromagnetics Research Symposium*, Xiamen, déc. 2019.
- [C168] Conductivity reconstruction based on current-to-voltage map for acousto-electric tomography.
C. Li, A. Kang, D. Lesselier
PIERS PhotonIcs & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C169] Improving the quality of images of a homogeneous anisotropic weld mold with a local optimization scheme based on a surrogate model.
C. Ménard, S. Robert, D. Lesselier
PIERS PhotonIcs & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C170] Nonlinearized electromagnetic imaging of complex biological structures - towards data fusion.
Y. Qin, T. Rodet, M. Lambert, D. Lesselier
PIERS PhotonIcs & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C171] Convolutional neural networks for imaging of micro-structures.
P. Ran, D. Lesselier, M. Serhir
PIERS PhotonIcs & Electromagnetics Research Symposium, Xiamen, déc. 2019.
- [C172] Ultrasonic array imaging in anisotropic steel components with unknown properties using optimization algorithms
C. Ménard, S. Robert, R. Miorelli, D. Lesselier
73rd International Institute of Welding Annual Assembly, Singapour, juillet 2020.
- [C173] Imaging of a micro-structure: binary contrast source inversion and convolutional neural networks
P. Ran, Y. Qin, D. Lesselier, M. Serhir

General Assembly of URSI (URSI GASS 2020), Rome, August-Sept. 2020
[paru en Proceedings seulement, URSI GASS annulée de par la pandémie]

- [C174] On nonlinearized inversion procedures and their application to breast imaging.
Y. Qin, T. Rodet, M. Lambert, D. Lesselier

General Assembly of URSI (URSI GASS 2020), Rome, August-Sept. 2020
[paru en Proceedings seulement, URSI GASS annulée de par la pandémie]

- [C175] On the diagnostic of a complex sub-wavelength micro-structure via machine learning tool

P. Ran, M. Serhir, D. Lesselier

2021 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting (APS/URSI), Singapore, déc. 2021

- [C176] Data fusion and non-destructive testing of damaged fiber-reinforced laminates.

V. Noël, T. Rodet, D. Lesselier

25th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE'22), Budapest, juin 2022.

- [C177] Identification and characterization of damaged fiber-reinforced laminates in a Bayesian framework.

V. Noël, T. Rodet, and D. Lesselier

26th International Workshop on Electromagnetic Nondestructive Evaluation (ENDE'23), Thessalonique, juin 2023.

- [C178] Electromagnetic breast imaging and uncertainty quantification with Bayesian Neural Networks.

V. Noël, T. Rodet, and D. Lesselier

44th Photonics and Electromagnetics Research Symposium - Progress In Electromagnetics Research Symposium, Prague, juin 2023.

V. Noël y a reçu le 1st prize Student Award, thématique SC 5. Remote Sensing, Inverse Problems, Imaging, Radar and Sensing

**Communications ayant fait l'objet ultérieur d'actes édités ou ouvrage
(référencées en tant que [La ...] ou [Lc ...])**

- [Ce1] On the microwave and ultrasonic imaging of buried targets.

L. Chommeloux, B. Duchêne, C. Pichot, D. Lesselier, W. Tabbara, J.-C. Bolomey

NATO Advanced Research Workshop on Direct and Inverse Methods in Radar Polarimetry, Bad-Winsheim, sept. 1988. Invitation (D. Lesselier) au Workshop.

- [Ce2] Computation of electromagnetic field diffracted by an inhomogeneity in metal: a first step in magnetic imaging.

R. Zorgati, A. Bernard, F. Pons, B. Duchêne, D. Lesselier, W. Tabbara

3rd. International Symposium on Nondestructive Characterization of Materials, Saarbrück, oct. 1988.

- [Ce3] Fast iterative calculation of ultrasonic scattering by buried 2-D fluid targets, insonified by line sources.

D. Lesselier, B. Duchêne

IEEE 1989 Ultrasonics Symposium, Montréal, oct. 1989.

- [Ce4] Exact and approximate probing of sea-bottom.

R. de Oliveira Bohbot, D. Lesselier, W. Tabbara

IEEE 1989 Ultrasonics Symposium, Montréal, oct. 1989.

- [Ce5] On the eddy current imaging of defects in a conductive half-space.

R. de Oliveira Bohbot, B. Duchêne, D. Lesselier, N. Coutanceau

SPIE International Symposium on Optical Applied Science and Engineering Conference, San Diego, juil. 1992.

- [Ce6] Eddy current imaging of defects in a conductive half-space as an inverse wave scattering problem.
D. Lesselier, R. de Oliveira Bohbot, B. Duchêne, C. Rozier, F. Brouaye, M. Lefebvre
Contribution invitée, *Conference Methoden und Verfahren der Mathematischen Physik*, Oberwolfach, déc. 1993.
- [Ce7] Characterization of a cylindrical vibrating body in shallow water from partial measurement of its radiated field.
C. Rozier, D. Lesselier
Oceans 1995 MTS/IEEE, San Diego, oct. 1995
(*C. Rozier a été le récipiendaire d'un Prix Etudiant de l'IEEE Oceanic Engineering Society.*)
- [Ce8] Eddy current characterization of 3-D bounded defects in metal tubes using a wavefield integral formulation modeling.
V. Monebhurrun, B. Duchêne, et D. Lesselier, R. Zorgati
1st Int. Workshop on Electromagnetic Nondestructive Evaluation, Londres, sept. 1995.
- [Ce9] Mapping 2-D defects in a conductive half-space by eigenfunction expansions in K-space of Fourier-Laplace transforms.
A. Litman et D. Lesselier, C. De Mol
1st Int. Workshop on Electromagnetic Nondestructive Evaluation, Londres, sept. 1995.
- [Ce10] Optimal shape reconstruction of a perfect target placed in shallow water.
C. Rozier et D. Lesselier, T. Angell
3rd European Conference on Underwater Acoustics, Heraklion, juin 1996.
- [Ce11] On the retrieval of an extended vibrating source in shallow water.
C. Rozier, D. Lesselier
3rd European Conference on Underwater Acoustics, Heraklion, juin 1996.
- [Ce12] INES: 3D eddy current Imaging for a Nondestructive Evaluation System applied to steam generator tubes
R. Zorgati, V. Monebhurrun, P. Gros, B. Duchêne, D. Lesselier, C. Chavant
23rd Review of Progress in Quantitative Nondestructive Evaluation, Brunswick, juil. 1996.
- [Ce13] Location and reconstruction of objects using a modified gradient approach.
R. E. Kleinman et P. M. Van den Berg, B. Duchêne et D. Lesselier
Contribution invitée, *Conférence on Inverse Problems of Wave Propagation and Diffraction*, Aix-les-Bains, sept. 1996.
Proc, 9-22.
- [Ce14] Reconstruction of an impenetrable obstacle immersed in a shallow water acoustic waveguide.
C. Rozier et D. Lesselier, T. Angell et R. E. Kleinman
Conférence on Inverse Problems of Wave Propagation and Diffraction, Aix-les-Bains, sept. 1996.
Recueil des Résumés, 30.
- [Ce15] A level-set approach for eddy current imaging of defects in a conductive half-space.
A. Litman et D. Lesselier, F. Santosa
Conference on Inverse Problems of Wave Propagation and Diffraction, Aix-les-Bains, sept. 1996
Recueil des Résumés, 64.
- [Ce16] Multifrequency version of the modified gradient algorithm for reconstruction of complex refractive indices.
R. E. Kleinman, P. M. Van den Berg et B. J. Kooij, B. Duchêne, D. Lesselier et M. Lambert

Contribution invitée, SPIE Annual Meeting, Conf. on Computational, Experimental, and Numerical Methods for Solving Ill-Posed Inverse Imaging Problems: Medical and Nonmedical Applications, San Diego, juil.-août 1997.

- [Ce17] Eddy current nondestructive evaluation of a 3-D bounded defect in a metal tube using volume integral methods and nonlinearized inversion schemes.
V. Monebhurrun, D. Lesselier, B. Duchêne
3rd International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'97), Reggio de Calabria, sept. 1997.
- [Ce18] Optimal contour reconstruction of a sound-hard obstacle in a shallow water acoustic waveguide.
M. Bocly, M. Lambert, C. Rozier, D. Lesselier
4th European Conference on Underwater Acoustics (ECUA '98), Rome, sept. 1998.
- [Ce19] Eddy current nondestructive evaluation using SQUIDS.
V. Monebhurrun, D. Lesselier, et B. Duchêne, A. Ruosi, M. Valentino, G. Pepe et G. Peluso
4th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'98), Chatou, sept. 1998.
Recueil des Résumés, 48-49
- [Ce20] On nonlinearized wavefield inversion methods and the identification of buried objects.
D. Lesselier
Contribution invitée, International Conference on Applied Mathematics, in memory of R. E. Kleinman, Newark, nov. 1998, F. Santosa *et al.* eds, CRC Press LLC, Boca Raton, 1999.
(A donné naissance sous une forme co-signée avec B. Duchêne à [Lc4].)
- [Ce21] On the numerical modeling of eddy current nondestructive evaluation with the FEM-BEM TRIFOU software in controlled configurations.
V. Bertrand, D. Lesselier, et S. Mastorchio
5th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'99), Des Moines, août 1999.
- [Ce22] On the characterization of obstacles in shallow water using rigorous inversion methods.
M. Lambert, D. Lesselier, B. Duchêne
1st Workshop on Inverse Problems in Underwater Acoustics, Heraklion, Crete, mai 1999.
- [Ce23] On the modeling and inversion of 3-D inclusions in conductive media using extended Born models in the diffusive regime.
D. Dos Reis, M. Lambert, D. Lesselier
10th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2001), Tokyo, mai 2001.
- [Ce24] Eddy-current evaluation of 3-D defects in a metal plate: a first analysis of a contrast-source gradient method.
D. Dos Reis, M. Lambert, D. Lesselier
7th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'01), Kobé, mai 2001.
- [Ce25] On the controlled evolution of level sets and like methods in scalar inverse scattering.
C. Ramananjaona, M. Lambert, D. Lesselier
Colloque AMRTMA : Acoustics, Mechanics, and the Related Topics of Mathematical Analysis, Fréjus, juin 2002.
- [Ce26] Three-dimensional electromagnetic field in a conductive cylinder at eddy-current frequencies.
G. Micolau, G. Pichenot, D. Prémel, D. Lesselier, M. Lambert

8th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'02), Sarrebrück, juin 2002.

- [Ce27] A fast model of eddy-current ferrite-cored probes for NDE.
F. Buvat, G. Pichenot, D. Prémel, M. Lambert, D. Lesselier
9th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'03), Saclay, mai 2003.
- [Ce28] Volumetric and surface flaw models for the computation of the EC T/R probe signal due to a thin opening flaw.
J. Pavo, L. Maurice, D. Prémel, D. Lesselier, A. Nicolas
11th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'06), Iwata, juin 2006.
- [Ce29] Analysis of the potentialities and limitations of the integration between the IMSA and the level set method for inverse scattering.
M. Benedetti, D. Lesselier, A. Massa, M. Lambert
1st European Conference on Antennas and Propagation (EuCAP), Nice, nov. 2006.
- [Ce30] Numerical modeling of eddy current nondestructive evaluation of ferromagnetic tubes via an integral equation approach.
A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne
12th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'07), Cardiff, juin 2007.
- [Ce31] MUSIC-type imaging of dielectric spheres from single-frequency, asymptotic and exact arraydata.
S. Gdoura, D. Lesselier, G. Perrusson, P.-C. Chaumet
Progress in Electromagnetics Research Symposium (PIERS 2007), Prague, août 2007.
- [Ce32] Low-frequency interaction of magnetic dipoles and perfectly conducting spheroidal bodies.
P. Vafeas, G. Perrusson, D. Lesselier
8th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering, Lefkada, septembre 2007.
- [Ce33] Retrieval of an unknown number of buried spheres by differential evolution with multi-resolution multi-zone features.
A. Bréard, G. Perrusson, D. Lesselier
6th International Conference on Inverse Problems in Engineering: Theory and Practice (ICIPE 2008), Dourdan, juin 2008.
- [Ce34] Nonlinearized mapping of volumetric defect affecting a metal tube.
J. Abascal, M. Lambert, D. Lesselier, O. Dorn
13th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'08), Seoul, juin 2008.
- [Ce35] On the imaging of two-dimensional thin inclusions by a MUSIC-type algorithm from boundary measurements.
W. K. Park, H. Ammari, D. Lesselier
13th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'08), Seoul, juin 2008.
- [Ce36] Non-iterative MUSIC type algorithm for reconstructing two-dimensional thin dielectric inclusions.
W. K. Park, H. Ammari, D. Lesselier
EU-Korea Conference on Science and Technology (EKC'2008), Heidelberg, août 2008.
- [Ce37] A qualitative two-step inversion approach for the reconstruction of subsurface defects.

M. Donelli, M. Benedetti, M., D. Lesselier, A. Massa
IEEE International Geoscience and Remote Sensing Symposium (IGARSS'09), Cape Town, juil. 2009.

- [Ce38] Level set method for reconstruction of thin electromagnetic inclusions.
W. K. Park, H. Ammari, D. Lesselier
EU-Korea Conference on Science and Technology (EKC'2009), Reading, août 2009.
- [Ce39] On the retrieval of electromagnetically thin screens by non-iterative fast solution methods.
D. Lesselier, W. K. Park
Contribution invitée, International Conference on Electromagnetics in Advanced Applications (ICEAA'09), Turin, sept. 2009.
- [Ce40] Low-frequency modeling of the interaction of a magnetic dipole and two perfectly conducting spheres in a conductive medium.
P. Vafeas, D. Lesselier
9th International Workshop on Mathematical Methods in Scattering Theory and Biomedical Engineering, Patras, oct. 2009.
- [Ce41] Ultrasonic NDT optimization using Randomized Adaptive Differential Evolution
B. Puel, S. Chatillon, D. Lesselier, P. Calmon
6th Conference of the GDR 2501 Research on Ultrasound Propagation for NDT jointly with the 10th Anglo-French Physical Acoustics Conference (AFPAC), Lake District, janv. 2010.
- [Ce42] Metamodels as input of an optimization algorithm for solving an inverse eddy current testing problem.
R. Douvenot, M. Lambert, D. Lesselier
15th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'10), Szczecin, juin 2010.
- [Ce43] MUSIC-type algorithm for eddy-current non-destructive evaluation of small defects in metal plates
T. Henriksson, M. Lambert, D. Lesselier
15th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'10), Szczecin, juin 2010.
- [Ce44] Particle optimization with metamodel for crack characterization.
R. Douvenot, M. Lambert, D. Lesselier
URSI International Symposium on Electromagnetic Theory (EMTS 2010), Berlin, août 2010.
(Développé/publié en réf. [La43])
- [Ce45] Fast simulation method of multiple narrow crack in planar stratified media.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
16th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'11), Madras/Chennai, mars 2011.
- [Ce46] On a novel computational scheme of dyadic Green's functions of electrically-uniaxial planar layered composites.
Y. Zhong, X. Chen, M. Lambert, D. Lesselier
15th International Symposium on Applied Electromagnetics and Mechanics (ISEM 2011), Naples, sept. 2011.
- [Ce47] On a new stable modeling of the dyadic Green's functions of an electrically uniaxial planar-layered medium and applications.
Y. Zhong, M. Lambert, D. Lesselier, X. Chen
Contribution invitée, 2011 International Conference on Electromagnetics in Advanced Applications (ICEAA'11), Turin, sept. 2011.

- [Ce48] Electromagnetic time reversal and scattering by a small dielectric inclusion.
S. Gdoura, A. Wahab, D. Lesselier
NCMIP 2012, Second International Workshop on New Computational Methods for Inverse Problems, Cachan, mai 2012.
- [Ce49] ECT simulation of complex narrow cracks in planar multi-layered structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis,
17th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'12), Rio de Janeiro, juillet 2012.
- [Ce50] BEM modeling for ECT simulation of complex narrow cracks in multilayered structures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
Review of Progress in Quantitative Nondestructive Evaluation, Denver, juil. 2012. Proc. CD-ROM, 4 pp.
- [Ce51] Comparison of two modeling approaches of eddy current industrial non-destructive testing of steel pipes.
A. Trillon, F. Deneuville, C. Reboud, F. Foucher, D. Lesselier, L. Maurice
Review of Progress in Quantitative Nondestructive Evaluation, incorporating the 10th International Conference on Barkhausen Noise and Micromagnetic Testing, Baltimore, juil. 2013. Proc. CD-ROM, 4 pp.
- [Ce52] Fast calculation of electromagnetic scattering in anisotropic multilayers and its inverse problem.
G. Rodeghiero, P.-P. Ding, Y. Zhong, M. Lambert, D. Lesselier
Contribution invitée, *19th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'14)*, Xi'an, juin 2014.
- [Ce53] Eddy-current inspection modelling of a thin crack emanating from a borehole in a conducting plate.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
19th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'14), Xi'an, juin 2014.
- [Ce54] A fast integral equation model with a dedicated Green's kernel for eddy-current inspection of fastener holes in driver pickup mode.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
Review of Progress in Quantitative Nondestructive Evaluation, Boise, juil. 2014.
Proc. CD-ROM, 4 pp.
- [Ce55] MUSIC imaging method for low/high frequency inspection of composite multi-layers.
G. Rodeghiero, P.-P Ding Y. Zhong, M. Lambert, D. Lesselier
Review of Progress in Quantitative Nondestructive Evaluation, Boise, juil. 2014.
Proc. CD-ROM, 4 pp.
- [Ce56] Electromagnetic modeling of a periodic array of fibers embedded in a panel with single fiber missing.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
20th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'15), Sendai, sept. 2015.
Proc. paper OS7-4, pp. 80-81.
- [Ce57] Impedance of an induction coil accounting for the end-effect in eddy current inspection of steam generator tubes.
K. Pipis, A. Skarlatos, T. Theodoulidis, D. Lesselier
20th International Workshop on Electromagnetic Non-Destructive Evaluation (ENDE'15), Sendai, sept. 2015.
Proc. paper PS-18, pp. 115-116.

- [Ce58] On inverse scattering and imaging solutions for objects buried within uniaxially anisotropic media.
D. Lesselier, P.-P. Ding, G. Rodeghiero, M. Lambert, Y. Zhong
Contribution invitée, *15th Mediterranean Microwave Symposium (MMS2015)*, Lecce, déc. 2015.
- [Ce59] A modified gradient descent reconstruction algorithm for breast cancer detection using microwave radar and digital breast tomosynthesis.
M. Tivnan, C. Rappaport, M. Lambert, D. Lesselier
The 10th European Conference on Antennas and Propagation (EUCAP 2016), Davos, avril 2016.
- [Ce60] Electromagnetic retrieval of missing fibers in periodic fibered laminates via sparsity concepts.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
EUSIPCO 2016, Budapest, août 2016.
- [Ce61] Fast models dedicated to simulation of eddy current thermography.
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
22st International Workshop on Electromagnetic Nondestructive Evaluation (ENDE 2017), Saclay, sept. 2017.
(*A. Ratsakou a reçu, avec son poster, le troisième prix de ENDE*)
- [Ce62] On the electromagnetic probing of man-made and natural buried structures
Contribution invitée, M. Serhir, M. Lambert, D. Lesselier, X. Ye
in *Proc. 2018 International Conference on Microwave and Millimeter Wave Technology (ICMWT 2018)*, Chengdu, mai 2018.
- [Ce63] On the modeling and diagnosis of a micro-structured wire antenna system.
H. Tu, M. Serhir, P. Ran and D. Lesselier
in *Proc. 2018 International Conference on Microwave and Millimeter Wave Technology (ICMWT 2018)*, Chengdu, mai 2018.
- [Ce64] Full-wave model of 3D scattering by a fibered laminate
C. Li, D. Lesselier, Y. Zhong, Z. Liu
in *Proc. 2018 International Conference on Microwave and Millimeter Wave Technology (ICMWT 2018)*, Chengdu, mai 2018.
- [Ce66] Fast simulation approach dedicated to infrared thermographic inspection of delaminated planar pieces
A. Ratsakou, C. Reboud, A. Skarlatos, D. Lesselier
45th Annual Review of Progress in Quantitative Nondestructive Evaluation, Burlington, juil. 2018
- [Ce67] Impact of root diameter and water content on tree roots detection using Ground Penetrating Radar.
A. Aboudourib, M. Serhir, D. Lesselier
13th European Conference on Antennas and Propagation (EUCAP 2019), convened session : *Theoretical, Algorithmic, and Experimental Advances in GPR*, Cracovie, mars-avril 2019.
- [Ce68] Diagnostic within a dielectric micro-structure: time-reversal and sparsity-constrained imaging.
P. Ran, Z. Liu, D. Lesselier, M. Serhir
13th European Conference on Antennas and Propagation (EUCAP 2019), Cracovie, mars-avril 2019.
- [Ce69] Electromagnetic imaging of a dielectric micro-structure via convolutional neural networks.
P. Ran, Y. Qin, D. Lesselier
27th European Signal Processing Conference, EUSIPCO 2019, A Coruña, sept. 2019.
(*P. Ran a été sélectionnée parmi les 10 finalistes de la compétition "thèse en 3 minutes" de EUSIPCO.*)
- [Ce70] A wavelet-based contrast source inversion method.
Y. Zhang, M. Lambert, A. Fraysse, D. Lesselier
2021 IEEE 19th International Symposium on Antenna Technology and Applied Electromagnetics (ANTEM), Winnipeg, août 2021.

Y. Zhang a reçu le 1er prix étudiant de ANTEM.

[Ce71] Use of sparsity in nonlinear electromagnetic imaging: wavelet-based contrast source method

Y. Zhang, M. Lambert, A. Fraysse, D. Lesselier

XXXIVth General Assembly and Scientific Symposium of the International Union of Radio Science (URSI GASS), Rome, août-sept. 2021.

[Ce72] On breast imaging from joint microwave and acoustic data within a Bayesian framework.

Y. Qin, T. Rodet, D. Lesselier

Contribution sollicitée, *16th European Conference on Antennas and Propagation (EUCAP 2022)*, Madrid, mars-avril 2022.

[Ce73] Breast imaging by cascaded CNN from joint microwave and ultrasonic data.

V. Noël, Y. Qin, T. Rodet, D. Lesselier

30th European Signal Processing Conference (EUSIPCO 2022), Belgrade, août-sept. 2022.

Brevets

[B1] Perfectionnements apportés à un dispositif correcteur d'efficacité pour appareil d'échantillonnage de signaux.

D. Brunol, P. Combes, J. Garnault, D. Lesselier, J. L. Petit, F. Pupat

Anvar n°76.23.679, Brevet en France, août 1976.

(Ce brevet, sur travaux lors de mon stage de 2^e année d'Ecole, n'a pas connu de développement industriel.)

[B2] Procédé et dispositif de détection et de caractérisation d'un élément réflecteur dans un objet.

Method and device for detecting and characterizing a reflecting element in an object.

EU no. 01659860, 12/10/2016

US Patent no. 10921293B2, 16/02/2021

P. Brédif, E. Iakovleva, D. Lesselier, O. Roy, K. Sy

Communications à des colloques nationaux/internationaux/ sans actes/actes à diffusion restreinte (Certaines ont fait l'objet ultérieur d'actes édités, référés en [La...])

[N1] Méthodes numériques pour la diffraction inverse.

J.-C. Bolomey, C. Durix, D. Lesselier, W. Tabbara

Journées de Diffraction Inverse, Marseille, avril 1976.

[N2] Pénétration d'impulsions électromagnétiques dans une lame inhomogène et dispersive.

J.-C. Bolomey, C. Durix, D. Lesselier

Journée d'Etudes SEE : Méthodes Numériques en Protection Electromagnétique, Gif-sur-Yvette, nov. 1977.

[N3] Caractérisation temporelle d'une structure électromagnétique stratifiée.

J.-C. Bolomey, C. Durix, D. Lesselier, W. Tabbara

Ecole d'Eté du Trégor : Théorie et pratique des mesures temporelles ; application à la caractérisation des matériaux, dispositifs et systèmes, CNET, Le Trégor, juil. 1978.

[N4] Approximations physiques dans les problèmes inverses : diagnostic acoustique et électromagnétique de coquilles cylindriques.

J.-C. Bolomey, B. Duchêne, D. Lesselier, C. Pichot, W. Tabbara

Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1981.

[N5] Détermination de la permittivité et de la conductivité d'un milieu stratifié à l'aide d'un dipôle enterré.

F. Falchetti, D. Lesselier, W. Tabbara

Journées Problèmes Inverses et Applications, CNRS-LCPC, Paris, janv. 1983.

Recueil des Journées, 28-30.

- [N6] Diagnostic d'un milieu stratifié au moyen d'un dipôle magnétique.
D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1983.
- [N7] Contribution à l'analyse de la tomographie ultrasonore par diffraction.
B. Duchêne, D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, nov. 1984.
- [N8] Contribution à l'imagerie ultrasonore quantitative.
B. Duchêne, D. Lesselier, W. Tabbara
2^e Colloque sur la Diffusion des Ondes Ultrasonores, Univ. Paris-VII, Paris, déc. 1984.
- [N9] Experimental and numerical evaluation of an acoustical diffraction tomography technique in fluids.
D. Lesselier, B. Duchêne, W. Tabbara
Contribution invitée, *US-FRANCE Conference on Near-Field Microwave Imaging*, Georgia Institute of Technology, Atlanta, juin 1985.
- [N10] Tomographie par diffraction appliquée à l'imagerie ultrasonore d'objets enfouis.
B. Duchêne, D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, nov. 1985.
- [N11] Imaging inhomogeneous media by diffraction tomography techniques. Critical examination and prospects.
D. Lesselier, B. Duchêne, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1986.
- [N12] Electromagnetic probing from boreholes. Comparison of exact and approximate methods.
W. Tabbara, D. Lesselier, H. Galan-Malaga
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1986.
(Développé et publié en réf. [La2].)
- [N13] Logging invaded boreholes. Approximate solutions.
D. Lesselier, H. Galan-Malaga, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1987.
- [N14] Imagerie acoustique d'objets enterrés.
B. Duchêne, D. Lesselier, W. Tabbara
Colloque Diffusion Electromagnétique et Acoustique. Détection et Problème Inverse, marseille, mai 1988.
- [N15] Caractérisation de milieux stratifiés plans: bilan et perspectives. Application au diagnostic du fond marin.
D. Lesselier, W. Tabbara
Colloque Diffusion Electromagnétique et Acoustique. Détection et Problème Inverse, marseille, mai 1988.
- [N16] Caractérisation d'un fond marin par des méthodes exactes et approchées.
R. de Oliveira Bohbot, D. Lesselier, W. Tabbara
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, nov. 1989.
- [N17] Méthodes de calcul pour la diffraction par des corps cylindriques.
V. Gérard, D. Lesselier, F. Molinet
Atelier Section efficace radar de corps parfaitement conducteurs ou recouverts, Journées Internationales sur les Antennes, Nice, nov. 1990.
- [N18] Caractérisation acoustique de milieux stratifiés plans. Application au diagnostic du fond marin.

- R. De Oliveira-Bohbot, D. Lesselier
Réunion Groupe d'Etudes sur la Propagation Acoustique, Bordeaux, déc. 1990.
- [N19] Inversion de défauts de conductivité dans des matériaux métalliques. Tomographie par diffraction et inversion généralisée.
B. Duchêne, D. Lesselier et R. de Oliveira Bohbot, R. Zorgati, F. Pons et N. Coutanceau
Rencontre Interdisciplinaire Problèmes Inverses, RCP 264, Montpellier, déc. 1991.
- [N20] Imagerie qualitative et quantitative de défauts affectant un demi-espace homogène. Applications au contrôle non destructif en ultrasons, microondes et courants de Foucault.
D. Lesselier, C. Pichot
Séminaire Intern. Problèmes Inverses en Electromagnétisme, Toulouse, nov. 1992.
- [N21] Caractérisation acoustique de milieux stratifiés plans. Application au diagnostic du fond marin.
D. Lesselier, M. Lambert, R. de Oliveira Bohbot, C. Rozier, W. Tabbara
Réunion Groupe d'Etudes sur la Propagation Acoustique, Lyon, sept. 1995.
- [N22] The inversion of buried structures in a nonlinearized wavefield framework.
Contribution collective invitée présentée par D. Lesselier, *1st EMSL User Workshop*, Ispra, avril 1996.
- [N23] On the inversion of binary objects in a nonlinearized wavefield framework.
B. Duchêne, M. Lambert, D. Lesselier, A. Litman, V. Monebhurrun, C. Rozier, et L. Souriau, T. S. Angell et R. E. Kleinman, F. Santosa
Contribution collective invitée présentée par D. Lesselier
3ème Séminaire Int. Problèmes Inverses en Electromagnétisme et Acoustique, Clermont-Ferrand, juin 1997.
- [N24] The modified gradient algorithm in three-dimensional inverse scattering with multi-frequency data.
R. E. Kleinman, P. M. Van den Berg, D. Lesselier et B. Duchêne
Contribution invitée, *3ème Séminaire Int. Problèmes Inverses en Electromagnétisme et Acoustique*, Clermont-Ferrand, juin 1997.
- [N25] Inversion d'objets binaires en courants de Foucault dans un formalisme d'ondes. Application au contrôle de plaques et de tubes
V. Monebhurrun, A. Litman, D. Lesselier, B. Duchêne
Contribution invitée, *Les Ateliers de la Recherche EDF*, Clamart, nov. 1997.
- [N26] Integral methods and nonlinearized inversion of buried obstacles.
M. Lambert, D. Lesselier
Contribution invitée, *4ème Séminaire Int. Problèmes Inverses en Electromagnétisme et Acoustique*, Clermont-Ferrand, mai 1999.
- [N27] Shape reconstruction by controlled evolution of a level set: from a min-max formulation to numerical experimentation.
C. Ramanajaona, M. Lambert et D. Lesselier, J.-P. Zolésio
RCP-264: Inverse Problems and Nonlinearity, Montpellier, juin 2000.
- [N28] On the characterization of 2-D buried obstacles by nonlinearized wavefield inversions.
M. Lambert, D. Lesselier
Contribution invitée, *RCP-264: Inverse Problems and Nonlinearity*, Montpellier, juin 2000.
- [N29] On the retrieval of a binary object using a fixed-point method.
C. Ramanajaona, M. Lambert et D. Lesselier, J.-P. Zolésio
Conference on Applied Inverse Problems: Theoretical and Computational Aspects, Montecatini Terme, juin 2001.

- [N30] Problèmes inverses : état de l'art.
D. Lesselier, M. Lambert, G. Perrusson
Contribution invitée, Journées Scientifiques CNFRS, Interaction du champ électromagnétique avec l'environnement, Paris, fév. 2005.
- [N31] Imagerie électromagnétique MUSIC d'une collection de petites inclusions 3-D.
E. Iakovleva, D. Lesselier et G. Perrusson, H. Ammari
Réunion Générale Interférences d'Ondes, GDR ONDES, Besançon, nov. 2005
- [N32] Caractérisations de familles d'inclusions en électromagnétisme 3D. Points clés et perspectives.
E. Iakovleva, D. Lesselier et G. Perrusson, H. Ammari
Contribution invitée, Journée Thématique Diffusion Multiple, GDR ONDES-GDR ULTRASONS, Gif-sur-Yvette, fév. 2006
- [N33] 3-D electromagnetic inverse scattering methodologies with emphasis on the retrieval of small objects.
E. Iakovleva, D. Lesselier, G. Perrusson, et S. Gdoura, H. Ammari
Contribution invitée, 2nd Workshop on Advanced Computational Electromagnetics, Gand, mai 2006
- [N34] On level set methods for inverse scattering.
D. Lesselier, O. Dorn
Contribution invitée, Scattering Theory and Related Problems, Conference at the occasion of the 60th birthday of Professor George Dassios, Patras, août 2006.
- [N35] Low-frequency interaction of magnetic dipoles and perfectly conducting ellipsoidal bodies in a conductive medium.
P. Vafeas, G. Perrusson, D. Lesselier
Scattering Theory and Related Problems, Conference at the occasion of the 60th birthday of Professor George Dassios, Patras, août 2006.
- [N36] Sur l'imagerie électromagnétique MUSIC de petites inclusions volumétriques enfouies dans un demi-espace.
S. Gdoura, E. Iakovleva, D. Lesselier, et G. Perrusson,
Journée thématique Retournement Temporel, GDR ONDES - GDR IMCODE, Paris, janv. 2007.
- [N37] Caractérisation électromagnétique basse-fréquence d'objets enfouis dans le sol à l'aide d'un algorithme d'évolution différentielle avec stratégie de communication entre groupes et multi-résolution.
A. Breard, G. Perrusson, D. Lesselier
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N38] Gradient-based level set reconstruction of a 3D-defect embedded in a non-magnetic material using eddy-currents.
J. Abascal, M. Lambert, D. Lesselier, O. Dorn
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N39] Localisation et caractérisation de défauts simples dans les cristaux photoniques de dimension finie.
J.-P. Groby, D. Lesselier, H. Ammari
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N40] Modélisation d'inspection des tubes ferromagnétiques par une approche d'intégrale de volume.
A. Skarlatos, G. Pichenot, M. Lambert, D. Lesselier, B. Duchêne
Réunion Générale Interférences d'Ondes, GDR ONDES, Bordeaux, nov. 2007.
- [N41] Modélisation d'inspection des tubes ferromagnétiques avec CIVA par une approche en intégrale de volume.
A. Skarlatos, G. Pichenot, D. Lesselier, M. Lambert, B. Duchêne

Journée thématique Contrôle non destructif par courants de Foucault : de la mesure à l'imagerie, GDR ONDES – COFREND, Paris, janv. 2008.

- [N42] Localisation et caractérisation de défauts simples dans un cristal photonique 2D de dimension finie.
J.-P. Groby, D. Lesselier
3ème édition des journées d'Imagerie Optique Non-Conventionnelle (GDR ONDES-GDR ISIS-SFO-EEA), Paris, mars 2008.
- [N43] Fissures minces et la faisabilité de leur imagerie électromagnétique non-itérative.
W. K. Park, D. Lesselier
Journée thématique Imagerie non-itérative, GDR ONDES, Paris, déc. 2008
- [N44] Adaptive database and eddy current testing.
G. Franceschini, M. Lambert, D. Lesselier
DIGITEO FORUM, Gif-sur-Yvette, oct. 2008.
- [N45] Non-iterative imaging of electromagnetic thin inclusions.
W. K. Park, D. Lesselier, H. Ammari
DIGITEO FORUM, Gif-sur-Yvette, oct. 2008.
- [N46] Tomorrow's R&D in electromagnetic and elastic nondestructive testing.
D. Lesselier, A. Le Brun
Contribution invitée, *DIGITEO FORUM*, Paris, oct. 2008.
- [N47] MUSIC-Type imaging of 3-D inclusions from asymptotic formulations within the framework of the full Maxwell system.
D. Lesselier, S. Gdoura, G. Perrusson, W.-K. Park
Contribution invitée, *Workshop Imaging Microstructures-Mathematical and Computational Challenges*, Paris, juin 2008.
- [N48] On the level-set evolution of thin electromagnetic screens in the wave propagation regime.
W.-K. Park and D. Lesselier
Proc. Workshop on Electromagnetic Inverse Problems, School of Mathematics, Univ. Manchester, juin 2009.
- [N49] Utilisation de méthodes d'optimisation appliquées au contrôle non destructif.
R. Douvenot, M. Lambert, D. Lesselier
OPTIMEO, Gif-sur-Yvette; oct. 2009.
- [N50] CAPVERS : Conception de capteurs et de techniques CND par méthodes inverses.
B. Puel, D. Lesselier, S. Chatillon
DIGITEO FORUM, Palaiseau, oct. 2009.
- [N51] Méthodes d'inversion utilisant des bases de données séquentielles appliquées au CND par Courants de Foucault.
R. Douvenot, M. Lambert, D. Lesselier
DIGITEO FORUM, Palaiseau, oct. 2009.
- [N52] Bases de données séquentielles et méthodes inverses appliquées au CND par courants de Foucault.
R. Douvenot, M. Lambert, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Paris, nov. 2009
Proc. en téléchargement sur le site web du GDR ONDES
- [N53] Conception de traducteurs et techniques multi-éléments optimisés pour le contrôle non destructif ultrasonore.
B. Puel, S. Chatillon, D. Lesselier

Assemblée Générale biannuelle GDR ONDES, Paris, nov. 2009.
Proc. en téléchargement sur le site web du GDR ONDES

- [N54] Sur une imagerie électromagnétique rapide d'écrans minces en demi-espace affecté d'inclusions aléatoires.
D. Lesselier, W.-K. Park
Manipulation spatiale et temporelle des ondes pour l'imagerie - Journées thématiques GDR ONDES, Marseille, mai 2010.
- [N55] Dyadic Green's functions of planar-layered anisotropic composites and applications from eddy currents to microwaves.
Y. Zhong, M. Lambert, D. Lesselier, X. Chen
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N56] Modélisation du contrôle non-destructif par courants de Foucault d'entailles de très faible ouverture.
R. Miorelli, C. Reboud, T. Theodoulidis, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N57] Localisation d'obstacles tridimensionnels par retournement temporel d'ondes électromagnétiques et cartographie de l'énergie.
M. Benhamouche, M. Serhir, L. Bernard, L. Pichon, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N58] Optimisation particulaire par métamodèle appliquée au CND par courants de Foucault.
R. Douvenot, M. Lambert, D. Lesselier
Assemblée Générale biannuelle GDR ONDES, Nice, nov. 2011.
Proc. en téléchargement sur le site web du GDR ONDES
- [N59] On a preliminary analysis of the electromagnetic small-scale modeling of composite panels: periodic arrangement of circular cylindrical fibers.
C. Li, D. Lesselier
Journées Scientifiques, URSI France, L'électromagnétisme, 150 - 1, une science en pleine action, Paris, mars 2013.
- [N60] An efficient interpolation for calculation of the response of composite layered material and its implementation in MUSIC imaging
G. Rodeghiero, Y. Zhong, M. Lambert, D. Lesselier, X. Chen
Assemblée Générale biannuelle GDR ONDES, Dijon, oct. 2013
Proc. en téléchargement sur le site web du GDR ONDES
- [N61] Electromagnetic small-scale modeling of composite panels
C.Y. Li, D. Lesselier, Y. Zhong, M. Lambert
Assemblée Générale biannuelle GDR ONDES, Dijon, oct. 2013.
Proc. en téléchargement sur le site web du GDR ONDES
- [N62] On the electromagnetic modeling of anisotropic panels.
Y. Zhong, P. Ding, G. Rodeghiero, M. Lambert, D. Lesselier, X. Chen, C. Li
Assemblée Générale biannuelle GDR ONDES, Dijon, oct. 2013.
Proc. en téléchargement sur le site web du GDR ONDES
- [N63] Développement de méthodes de caractérisation de défauts plans basées sur les reconstructions FTP.
K. Sy, P. Bredif, E. Iakovleva, D. Lesselier, O. Roy

Réunion Générale Interférences d'Ondes, GDR ONDES, Lyon, oct. 2015.

- [N64] Nondestructive testing of fiber array with multiple missing fibers.
Z. C. Liu, C. Y. Li, D. Lesselier, Y. Zhong
Réunion Générale Interférences d'Ondes, GDR ONDES, Lyon, oct. 2015.
- [N65] Nondestructive testing of fiber array with multiple missing fibers.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
2ème Edition des Doctoriales de la COFREND, Marne-la-Vallée, nov. 2016.
- [N66] On electromagnetic modeling and imaging of defects in periodic fibered laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Contribution invitée, Réunion Générale Interférences d'Ondes, GDR ONDES, Nice Sophia Antipolis, nov. 2017.
- [N67] Diagnostic électromagnétique et imagerie d'une microstructure diélectrique à l'aide de réseaux de neurones convolutionnels.
P. Ran, D. Lesselier, M. Serhir
Réunion Générale GDR ONDES, CentraleSupélec Gif-sur-Yvette, nov. 2019.
- [N68] Optimisation de l'imagerie ultrasonore multi-éléments dans des aciers anisotropes dont les propriétés élastiques sont incertaines : application au contrôle non-destructif
C. Ménard, S. Robert, D. Lesselier
Réunion Générale GDR ONDES, CentraleSupélec Gif-sur-Yvette, nov. 2019.
- [N69] Reconstruction 3D d'architectures racinaires par radar à pénétration de sol.
A. Aboudourib, M. Serhir, D. Lesselier
Réunion Générale GDR ONDES, CentraleSupélec Gif-sur-Yvette, nov. 2019.
- [N70] Imagerie ultrasonore adaptative appliquée à des structures anisotropes dont les propriétés matériaux sont inconnues
C. Ménard, S. Robert, D. Lesselier
Doctoriales de la COFREND, à distance, Paris, déc. 2020.
<http://www.ndt.net/?id=25696>
- [N71] Ground Penetrating Radar Imaging techniques: Multi- Vs Bi-static Configurations
A. Aboudourib, X. Liu, M. Serhir, M. Lambert, D. Lesselier, A. Kameni, and L. Pichon
SONDRA 5th Workshop, Avignon, juin 2022.

Autres manifestations (séminaires, ...) (tous par D. Lesselier sauf si précisé)

- [S1] Inverse scattering: optimization techniques.
D. Lesselier
Séminaire sur les méthodes de calcul modernes en électromagnétisme, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1984.
- [S2] Inverse problems. Modelization and numerical techniques.
W. Tabbara, D. Lesselier
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Sect. Française, Gif-sur-Yvette, sept. 1986. (Actes, 8, 1, 1-8.)
- [S3] Inverse problems. Imaging of inhomogeneous media.
D. Lesselier, W. Tabbara
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986. (Actes, 8, 2, 1-5.)

- [S4] Inverse problems. Characterization of stratified media.
D. Lesselier, W. Tabbara
Conférence invitée, Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S5] Inverse problems. Characterization of stratified media.
D. Lesselier, W. Tabbara
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S6] Inverse problems. Modelization and numerical techniques.
W. Tabbara, D. Lesselier
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S7] Inverse problems. Imaging of inhomogeneous media.
D. Lesselier, W. Tabbara
Short Course on Vector Inverse Methods in Radar-Target-Clutter Imaging, SEE-IEEE Section Française, Gif-sur-Yvette, sept. 1986.
- [S8] Recent advances and critical issues in imaging and sounding.
D. Lesselier
IEEE San Diego Section, Monthly Meeting, San Diego, juin 1987.
- [S9] Electromagnetic and acoustic applications of diffraction tomography.
B. Duchêne, D. Lesselier, W. Tabbara
Ecole CEA-EDF-INRIA Problèmes Inverses, Rocquencourt, mars 1990.
- [S10] Caractérisation acoustique de milieux stratifiés plans : application au fond marin.
D. Lesselier
Séminaire INRIA (projets Ident, etc.), Rocquencourt, mars 1991.
- [S11] Eddy current nondestructive testing in a wave scattering framework.
D. Lesselier, B. Duchêne
Séminaire IzfP, Sarrebrück, Allemagne, fév. 1994.
- [S12] Sur les problèmes inverses de diffraction des ondes et leurs applications à l'évaluation non-destructive de structures.
D. Lesselier, B. Duchêne
Séminaire LMA, Marseille, France, oct. 1994.
- [S13] Wavefield inversion of objects embedded in layered media using aspect-limited data; from backpropagation schemes to nonlinearized solutions.
D. Lesselier, B. Duchêne, L. Souriau, A. Litman, C. Rozier, V. Monebhurrun
Ecole des Ondes INRIA Problèmes Inverses et Propagation d'Ondes, Rocquencourt, nov. 1995.
- [S14] Problèmes inverses des ondes : reconstruction d'objets binaires enfouis en milieux stratifiés.
D. Lesselier
Observatoire Français des Techniques Avancées (OFTA), Paris, sept. 1997.
- [S15] On some novel wavefield inversion methods applied to binary objects.
D. Lesselier
Departement of Mathematics, University of Delaware, Newark, oct. 1997.
- [S16] Novel algorithms for wavefield inversion with emphasis on eddy current nondestructive evaluation.
D. Lesselier

INFM - Université Federico II, Naples, sept. 1998.

- [S17] Méthodes intégrales et inversion nonlinéarisée d'objets enfouis.
M. Lambert, D. Lesselier
Séminaire INRIA (projets Ident, etc.), Rocquencourt, juin 1999.
- [S18] Problèmes inverses des ondes en régime diffusif.
Contribution collective présentée par D. Lesselier, avec les apports particuliers doctoraux ou post-doctoraux de G. Perrusson, V. Monebhurrun et V. Bertrand
Séminaire INRIA (projets Ident.), Rocquencourt, oct. 1999.
- [S19] Sur la reconstruction non-linéarisée du contour d'un objet cylindrique de paramètres électriques prescrits par l'utilisateur.
C. Ramananjaona, M. Lambert, D. Lesselier, J.-P Zolésio
Séminaire Ecole Polytechnique (Centre de Mathématiques Appliquées), Palaiseau, avril 2001.
- [S20] Problèmes inverses des ondes et géosciences.
D. Lesselier
Schlumberger-Riboud Center Clamart, mai 2002.
- [S21] Méthodologies approchées pour la modélisation du CND CF et problèmes inverses.
D. Lesselier, M. Lambert
Journée courants de Foucault et CND (COFREND), Clamart, oct. 2004.
- [S22] On the MUSIC-type electromagnetic imaging of a collection of small 3-D bounded inclusions.
D. Lesselier, E. Iakovleva, H. Ammari, G. Perrusson
Department of Information and Communication Technology – University of Trento, oct. 2005.
- [S23] Modeling and inversion of ellipsoid-like objects in the diffusive regime using low-frequency scattering approaches and Born-extended hybrids.
G. Perrusson, D. Lesselier
Department of Information and Communication Technology – University of Trento, oct. 2005.
- [S24] Integral methods and non-linearized inversion of buried obstacles.
M. Lambert, D. Lesselier
Department of Information and Communication Technology – University of Trento, oct. 2005.
- [S25] 3-D electromagnetics, asymptotic models and MUSIC-type imaging of a collection of small scatterers.
D. Lesselier (travail conjoint avec E. Iakovleva, H. Ammari, S. Gdoura, G. Perrusson)
Schlumberger Doll Research, Ridgefield, mars 2006.
- [S26] Level-set methods and 3D geophysical applications.
O. Dorn, D. Lesselier
Schlumberger Doll Research, Ridgefield, mars 2006.
- [S27] MUSIC-type imaging of 3-D inclusions from asymptotic formulations within the framework of the full Maxwell system.
D. Lesselier, « pour illustrer un ensemble de travaux coopératifs sur la thématique conduit avec H. Ammari, P. C. Chaumet, S. Gdoura, E. Iakovleva, et G. Perrusson »
IHP Paris, janv. 2008.
- [S28] MUSIC-type imaging of 3-D inclusions from asymptotic formulations within the framework of the full Maxwell system.
D. Lesselier, « pour illustrer un ensemble de travaux coopératifs sur la thématique conduit avec H. Ammari, P. C. Chaumet, S. Gdoura, E. Iakovleva, et G. Perrusson »
Univ. Cergy Pontoise, sept. 2008.

- [S29] An introduction to Non-Destructive Evaluation (NDE) with adaptive databases as main illustration in eddy-current testing.
D. Lesselier *et al.*
National University of Singapore, nov. 2010.
- [S30] On low-frequency electromagnetic scattering by simple bodies in conductive medium, and extensions to subsurface probing.
D. Lesselier *et al.*
National University of Singapore, nov. 2010.
- [S31] MUSIC-type imaging from asymptotic formulations within the full Maxwell system and additional examples.
D. Lesselier *et al.*
National University of Singapore, nov. 2010.
- [S32] Une combinaison de [S29] et [S31] a fait l'objet de [S32].
D. Lesselier *et al.*
University of Trento, nov. 2010.
- [S33] Modeling and simulation of electromagnetic interactions with complex 3-D structures, and application to the field of non-destructive testing.
D. Lesselier *et al.*
National University of Singapore, mars 2012.
- [S34] On non-destructive testing and evaluation and recent advances in electromagnetic modeling.
D. Lesselier *et al.*
Institute for Infocomm Research, Singapour, mars 2013.
- [S35] Broad-band electromagnetic small-scale modeling of periodically-composed laminates: a rigorous theoretical and numerical investigation.
D. Lesselier *et al.*
Xidian University, Xi'an, juin 2014
- [S36] Broad-band electromagnetic small-scale modeling of periodically-composed laminates: a rigorous theoretical and numerical investigation.
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014.
- [S37] Electromagnetic modeling and imaging of anisotropic media: a short guided tour.
D. Lesselier *et al.*
Xidian University, Xi'an, juin 2014.
- [S38] Electromagnetic modeling and imaging of anisotropic media: a short guided tour.
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014
- [S39] MUSIC-type imaging from asymptotic field formulations in 2-D and 3-D full Maxwell systems with additional examples.
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014.
- [S40] A recap on Non-Destructive Testing: whys and hows!
D. Lesselier *et al.*
UESTC, Chengdu, juin 2014.

*Les séminaires S41 à S44 furent donnés à Singapour en août 2015 (NUS, TEMASEK LABS & NUS, IHPC A*STAR) :*

- [S41] Eddy-current non-destructive testing: towards efficient modeling and simulation of interactions with damaged metal structures.
K. Pipis, R. Miorelli, C. Reboud, T. Skarlatos, D. Lesselier, with thanks to T. Theodoulidis,
- [S42] Electromagnetic scattering by anisotropic laminates, from computational modeling to imaging and inversion.
P.-P. Ding, G. Rodeghiero, Y. Zhong, M. Lambert, D. Lesselier
- [S43] On novel imaging and inversion modalities involving sparsity as an implicit or explicit prior.
H. Tu, H. Zaimaga, M. Tivnan, S. Gdoura, M. Lambert, D. Lesselier
- [S44] Electromagnetic scattering by fiber-reinforced, periodically-structured planar layers as a preliminary to imaging.
C. Y. Li, Z. C. Liu, Y. Zhong, D. Lesselier
donné by C. Li
- [S45] Fast calculation of electromagnetic scattering in anisotropic multilayers and its inverse problem
P.-P. Ding, M. Lambert, D. Lesselier
donné by P.-P. Ding
UESTC, Chengdu, oct. 2015.
- [S46] Imaging of damaged composites in a small-scale perspective.
D. Lesselier *et al.*
UESTC, Chengdu, juil. 2016.
- [S47] On electromagnetic modeling and imaging of defects in periodic fibered laminates: How to model the response of damaged laminates and image them with sparsity concepts.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Institut Fresnel, Marseille, mars 2017.
- [S48] Electromagnetic modeling and imaging of disorganized fiber-based laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
Fudan University, Shanghai, juil. 2017.
- [S49] Electromagnetic modeling and imaging of disorganized fiber-based laminates.
Z. Liu, C. Li, D. Lesselier, Y. Zhong
National University of Singapore, Singapore, juil. 2017.
- [S50] Eddy-current non-destructive testing, sparse-grid surrogate model, Bayesian inversion, and model choice.
C. Cai, S. Bilicz, M. Lambert, T. Rodet, D. Lesselier
*A*STAR*, Singapore, juil. 2017.
- [S51] Eddy-current non-destructive testing, sparse-grid surrogate model, Bayesian inversion, and model choice.
C. Cai, S. Bilicz, M. Lambert, T. Rodet, D. Lesselier
Technical University of Denmark, Lyngby, nov. 2017.
- [S52] Non-destructive Testing and Evaluation (NdT-NdE)
D. Lesselier *et al.*
Tsinghua University, Beijing, mai 2018.

[S53] Invité à *Northwestern Polytechnical University* et *Xidian University*, à Xi'an, fin octobre 2018, j'y ai donné, ainsi que à *Xi'an Jiaotong University*, une série de séminaires reprenant les grands thèmes précédents.

[S54] Electromagnetic imaging with focus on natural and artificial structures in subsoils
A. Aboudourib, M. Serhir, D. Lesselier
Xiamen University, Xiamen, déc. 2019.

Rapports internes et autres

[RI1] Experimental and numerical evaluation of an acoustical diffraction tomography technique in fluids.
D. Lesselier, B. Duchêne, W. Tabbara
Paru en *Partie B, Chap. II-2, de la thèse d'Etat* de B. Duchêne, Caractérisation ultrasonore de milieux fluides inhomogènes. Application au diagnostic et à l'imagerie, mars 1986.

[RI2] Quelques compléments : impédiographie et diagnostic optimal.
D. Lesselier, R. de Oliveira Bohbot
Paru en *Partie IV.3, de la thèse de Docteur en Sciences* de R. de Oliveira Bohbot, Caractérisation exacte et approchée de milieux stratifiés plans à l'aide de sources acoustiques. Application au diagnostic du fond sous-marin. déc. 1990.

[RI3] Uniqueness and complete families for an acoustic waveguide problem.
T. S. Angell et R. E. Kleinman, C. Rozier et D. Lesselier
Rapport 96 du Center for the Mathematics of Waves, University of Delaware, Newark.

Notons : Problèmes inverses de diffraction des ondes, D. Lesselier, Contribution invitée, *Dossier de Presse*, 5, XXVème Assemblée Générale de l'URSI, Lille, août-sept. 1996.