D. LESSELIER – 20/06/2026
Dissémination académique (rapports de contrats & conventions exclus)

pp. 1-3 Bref vitae (in English)

Notice that the "HAL-generated list of publications", https://hal.science/search/index?q=lesselier, for the years before 2003, only includes journal papers & book chapters. Otherwise, https://scholar.google.fr/citations?user=9y3AFmsAAAAJ&hl=frdata provides data on citations. One might refer 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. 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*, as L2S, 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), with a 5-year position that was renewed after proper competition in October 2024 for 5 years again.

In parallel, 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. 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 managed 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, 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, involving the organization of its 8th (biennial) plenary conference in CentraleSupélec at the end of October 2019, then under Philippe Lalanne's directorship, http://gdr-ondes.cnrs.fr, and now, in October 2027, within CentraleSupélec, he will organize with Marc Lambert, CNRS at GeePs, the plenary conference of the 25th anniversary of the GDR.

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 the 1970s until now, he has authored/co-authored 148 journal papers, 12 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 in 2023, and 55+ seminars 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 34 PhDs (a 25th pending) since 1986, that number including 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 Doctoral 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 said Ph.D. and post-doc fellows 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 many French as well as foreign universities, including in Newark, Gent, Leuven, Manchester, Trento, Singapore (NUS), 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, 9 collective books, and (no one achieved more in that journal ...) 5 special sections of the premier journal Inverse Problems since 2000 (those were with Tarek Habashy, 2000, John Bowler, 2002, Weng-Chow Chew, 2004, Oliver Dorn, 2010, Zhong Yu and Oliver Dorn, 2024). Lately, as an example, he convened with Mohammed Serhir two volumes (English and French) of the Waves domain within the vast Sciences encyclopedia (Wiley-ISTE), "Ground Penetrating Radar, From Theoretical Endeavors to Computational Electromagnetics Signal, Processing, Antenna Design, and Field Application," respectively published in May 2024 and January 2025. 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), it is worth reminding and still quite up to date. In addition, with Radio Science, he oversaw three invited reviews being published, that work of editing was in 2011.

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, often involving foreign (non-French) partners. The same holds regarding his role as an expert on 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, replete information is input in the present short text[1].)

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, recognized from

[1] Two still well-illustrative co-operative works in the French community among others led/co-led: the *Action Spécifique AS* ël*8, RTP 26, Instruments et Systèmes d'Ondes, Département STIC CNRS, Contrôle Non-Destructif – Intégration Multi-Capteur,* w. Claire Prada (2002-03) ; the *Groupe de Réflexion Thématique Num@tec - Pôle Ile-de-France, Interactions ondes/matières, structures et systèmes, capteurs, actionneurs et métrologie*, w. Yasser Alayli (2003-04).

January 2026 as IEEE Life Senior. For many years and continuing, he is active with the International Union of Radio Science, Commission B, of which 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 on the International Advisory Panel of Inverse Problems (IOP Science) after serving on its Editorial Board from 1997 to 2013 with "exceptional renewal for good service" in 2002. The years 2003-2023, he was a Member of the Editorial Boards of the Journal of Electromagnetic Waves and Applications, and the PIER Progress in Electromagnetic Research.

Also, since 1998 and up until the end of 2024, he was on the Standing Committee of the Electromagnetic Non-Destructive Evaluation Workshop Series (ENDE) and on 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 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 several scientific events, with strong international flavor for most of them, one not so old 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 has been a Member of the COFREND *Comité Scientifique Permanent* from 2015 until July 2024.

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.

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(145) 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 intégrS1ale 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, 3e 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
Traitement 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**, 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 en 2006.*) (*Selon l'éditeur, compté à partir de données SCOPUS, cet article est entre 2006 et 2010 inclus le 2ème article le plus cité parmi tous les articles du journal parus 2006 à 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
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C. Reboud, D. Prémel, G. Pichenot, D. Lesselier, B. Bisiaux
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B. Bisiaux, C. Reboud, D. Prémel, D. Lesselier
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Proc., CD-ROM & 73-74

[C109] On the calculation of the dyadic Green's function for an electrically uniaxial planar composite layering.
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A. Bréard, G. Perrusson, D. Lesselier
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Proc., CD-ROM.

[C118] MUSIC-type imaging of a small dielectric sphere buried in a half-space from exact and asymptotic data.
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G. Franceschini, M. Lambert, D. Lesselier
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Review of Progress in Quantitative Nondestructive Evaluation, San Diego, juil. 2010.
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Contribution invitée, *Progress in Electromagnetics Research Symposium (PIERS 2011)*, Marrakesh, mars 2011.
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[C124] Modélisation du contrôle par courants de Foucault d'entailles de très faibles ouvertures.
R. Miorelli, C. Reboud, D. Lesselier, T. Theodoulidis
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Proc., CD-ROM

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

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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
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Proc., 2 pp.

[C127] Non-iterative electromagnetic imaging of perfectly conducting screens from limited range farfield data.
W.-K. Park, D. Lesselier
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[C128] Performances of differential evolution to optimize ultrasonic arrays transducers.
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Proc. CD-ROM, 6 pp.

[C129] On the electromagnetic response of anisotropic laminates.
Y. Zhong, X. Chen, M. Lambert, D. Lesselier
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[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.
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[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.
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[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 reçu 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.
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[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 fiber-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 agorithms
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, 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)

[C179] Ultrasonic and microwave data fusion for breast imaging within an artificial intelligence context involving a Bayesian approach and transfer learning.
V. Noël, T. Rodet, D. Lesselier
IEEE International Symposium on Antennas and Propagation and ITNC-USNC-URSI Radio Science Meeting, 14-19 July 2024, Florence.

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(73) Communications ayant fait l'objet ultérieur d'actes édités ou ouvrage (notées 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. Lefebure
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 array data
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, sept. 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 Symposiuum (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 AdaptivRandomized 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 Evaluatio*n, 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 Evaluatio*n, 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 Evaluatio*n, 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 (ICMMT 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 (ICMMT 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 (ICMMT 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.

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(2) 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 conduits lors de mon stage de 2^{e} année d'Ecole, n'a pas connu de développement industriel ultérieur.)*

[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

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(72) Communications à des colloques nationaux/internationaux/ sans actes/actes à diffusion restreinte (Certaines ont fait l'objet ultérieur d'actes édités, referés 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° 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.
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[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 parfaitements 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, S*cattering 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
S*cattering 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. Lesselie
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.

[N72] Fusion ultrasons et micro-ondes en imagerie du sein via transformation de Radon morphologique
B. O. Mboua Etoga, T. Rodet, D. Lesselier
URSI France JS-26, Outils et Méthodes Intelligents pour les Radio-Sciences, Télécom-Paris, mai 2026.

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(57) 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 géociences.
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.

*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
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