

# Curriculum vitae - Jean AURIOL

## Personal Details

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**Civil engineer** from Ecole des Mines

**Ph.D. in applied mathematics and control theory** from Ecole des Mines, PSL Research University.

## Current position

Since 12/2019 **CNRS Permanent Researcher** at (L2S Laboratory), Université Paris-Saclay, France.

### Research interests:

- Practical control of networks of hyperbolic systems.
- Control of underactuated infinite-dimensional systems (hyperbolic equations and time-delay systems of neutral form) using integral equations.
- Efficient and Reliable control of coupled Stochastic and Partial differential Equations.
- Stabilization of mechanical vibrations in drilling devices.
- Neural networks-based estimators for infinite-dimensional systems.
- Adaptive control of neural fields.
- Traffic estimation and regulation.

**Keywords:** Distributed Parameter Systems, output feedback control, robustness, networks, Lyapunov analysis, time-delay systems, neutral systems, distributed delays, backstepping, mechanical vibrations, drilling, traffic networks, neural fields, integral equations.

## Previous position

11/2018-11/2019 **Postdoctoral fellow** in Roman Shor's team, University of Calgary, Canada.  
*Estimation and control of subsurfaces process during drilling operations.*

## Education and key qualifications

2024 **Habilitation to conduct research** (HDR) from Université Paris Saclay.  
*Contributions to the robust stabilization of networks of hyperbolic systems.*

2015-2018 **Ph.D** in Automatics and Applied Mathematics, CAS (Centre Automatique & Systèmes), Mines Paris, PSL Research University. **Advisors:** F. DI MEGLIO, and N. PETIT.  
*Robust design of backstepping controllers for systems of linear hyperbolic PDEs.*

2012-2015 **MINES Paris, Civil engineer**, specialized in applied mathematics and control theory.

## Publications (quantitative overview since 2016)

- **Author/co-author of 92 publications:**
  - **45 publications** in international journals with reviewing committees (5 additional publications are under review).
  - **40 publications** in international conferences with reviewing committees.
  - **1 Edited Volume** in the Springer series *Advances in Delays and Dynamics*.
  - **3 chapters** in collaborative books.
  - **1 Patent** (US Patent 11725499, accepted in 2023).
  - **1 Ph.D. thesis** and **1 HDR manuscript**.
- **H-index:** 22, **Index i10:** 39, 1450 citations (February 17<sup>th</sup> 2026) according to *Google Scholar* (GS).

- **Most cited publication:** [J. Auriol](#), F. Di Meglio, *Minimum time control of heterodirectional linear coupled hyperbolic PDEs*, *Automatica*, vol. 71, p.300-307, 2016 (GS: 154 citations).

## Teaching activities

More than **225 hours** in **French and Moroccan institutions** between 2022 and 2026.

- 2016-now **MINES Paris, PSL Research University**
  - Coordinator and lecturer for the MSc class *Complex analysis and applications* (30h/year, 35 students), 2021-now.
  - T.A. for the MSc class on *differential, integral and stochastic calculus* (20h/year, 20 students), 2021-now.
  - T.A. for the BSc class on *Differential Calculus* (25 students, 15h/year), 2016, 2017.
  - T.A. for the BSc class on *Control of Dynamical Systems* (25 students, 16h/year), 2016-2018.
  - Expert for the *Mechatronics projects* (10 MSc students, 15h/year), 2017-2018.
  - T.A for the MSc class on *Complex analysis* (20 MSc students, 15h/year), 2017, 2018.
- 2020-2024 **CENTRALESUPELEC**
  - T.A. for the BSc class on *system modeling*, (10h/year, 40 students).
  - T.A. for the BSc class on *control theory*, (10h/year, 40 students), 2024.
- 2020-now **EMINES** (Morocco)
  - Lecturer for the MSc class on *control theory*, (20h/year, 30 students).
- 2020-2023 **University Paris-Saclay**, Master ATSI
  - Lecturer for the MSc class on *Introduction to the stabilization of hyperbolic PDEs*, (3h/year, 30 students).
- 2019 **University of Calgary** (Canada)
  - Coordinator and Lecturer for the MSc class on *Introduction to optimization, machine learning, and control theory*, (50h/year, 60 students).
  - Coordinator and Lecturer for the MSc class on *Introduction to machine learning*, (20h/year, 30 students).
- 2019 **ENSTA ParisTech**
  - T.A. for the BSc class on *Control of Dynamical Systems* (25 students, 15h/year), 2016-2017.

## Scientific Animation

### International Conferences and workshops

- 2026 **Co-organizer** of the workshop *Recent Trends in Control and Estimation of Distributed Parameter Systems* at the European Control Conference (ECC), 2026, Reykjavik, Island.
- 2025 Member of the **organizing committee** for the SIAM Conference on Control and Its Applications (CT25)
- 2025 **Publicity chair** for the joint 9<sup>th</sup> IFAC Symposium on System Structure and Control (SSSC), 19<sup>th</sup> IFAC Workshop on Time Delay Systems (TDS), and 2<sup>nd</sup> IFAC Workshop on Control of Complex Systems (COSY).
- 2024 **Co-Organizer** of the session *Estimation and Control for Energy Storage Systems* at the European Control Conference (ECC), 2024, Stockholm, Sweden.
- 2020-2022 **Co-Founder and Organizer** of the *Distributed Parameters Systems online seminars*.
- 2021 **Co-organizer** of the 3<sup>rd</sup> international DECOD workshop.
- 2016-2018 **Organizer** of the bi-monthly *laboratory scientific workshops* of Centre Automatique et Systèmes.

### National and local seminars

- 2023-now **Organizer** of the *Infinite-dimensional workshops* of the L2S.
- 2026 **Co-Organizer** of the French Ecole MACS *Simulation à base d'agents pour les systèmes de production*.
- 2022-2026 **Organizer** of the *Ph.D. students seminars* of the L2S.
- 2016-2018 **Organizer** of the bi-monthly *laboratory scientific workshops* of Centre Automatique et Systèmes.

## Institutional Activities

- 2026-now **Head** of the research team MODESTY in L2S.
- 2024-2028 **Member** of the **Operational Committee** of **GDR MACS**, in charge *Young Researchers*. *MACS is a CNRS research group on modelization and analysis of dynamical systems. It dynamizes French research by organizing workshops and supporting young researchers.*
- 2023-now **Chair of the technical committee** on infinite-dimensional systems OSYDI for the **French Society of Automatics** (SAGIP).

- 2025-now **Publicity chair** for the American Society of Mechanical Engineers (ASME) Dynamic Systems and Control Division (DSCD) **Technical Committee** on *Distributed Parameter Systems*.
- 2019-now **Member** of the **IFAC Technical Committee 2.6** on *Distributed Parameter Systems*.
- 2019-now **Member** of the **IFAC Technical Committee 2.2** on *Linear Control Systems*.
- 2019-now **Member** of the **IEEE Technical Committee** on *Distributed Parameter Systems*.
- 2025 **Member** of the **Ph.D. award committee** of the doctoral school STIC of Université Paris-Saclay.
- 2017-2018 **Member** of the *Research Committee* of MinesParis.
- 2017-2018 **Member** of the *Doctoral School SMI Committee* (Sciences et Métiers de l'Ingénieur).

## Editorial and reviewing activities

### Journals and books

- 2026-now **Associate Editor** for *IEEE Control Systems Letters*, L-CSS
- 2023-now **Associate Editor** for *Systems & Control Letters*, SCL
- 2021 **Main Editor** of the volume *Advances in Distributed Parameter Systems* the Springer series *Advances in Delays and Dynamics*, vol 14.

### Member of Conference International Program Committee

- 2023-now **Associate Editor** for the European Control Conference, ECC.
- 2026 **Associate Editor** for the joint 23<sup>rd</sup> IFAC World Congress.
- 2025 **Associate Editor** for the joint 9<sup>th</sup> IFAC Symposium on System Structure and Control (SSSC), 19<sup>th</sup> IFAC Workshop on Time Delay Systems (TDS), and 2<sup>nd</sup> IFAC Workshop on Control of Complex Systems (COSY).
- 2022 **Associate Editor** for the 4<sup>th</sup> IFAC Workshop on Control of Systems governed by Partial Differential Equations, CPDE.
- 2021 **Associate Editor** for the 3<sup>rd</sup> DECOD workshop.
- 2020 **Associate Editor** for the 24<sup>th</sup> International Conference on System Theory, Control and Computing, ICSTCC.

### Reviewing

- 2016-now **Reviewer** for books, international journals, and conferences in theoretical and applied control.
  - o **Books:** Springer.
  - o The list of top international **journals** includes: Automatica, IEEE Transactions on Automatic Control, Systems & Control Letters, IEEE Transactions on Control Systems Technology, Journal of the Franklin Institute, Journal of Process Control, SIAM Journal of Applied Mathematics, etc.
  - o The list of top international **conferences** includes: IEEE Conference on Decision and Control, IEEE American Control Conference, IFAC World Congress, European Control Conference, IFAC Workshop on Control of Systems governed by Partial Differential Equations, etc.
  - o **Reviewer** for the French Agence Nationale de la Recherche (ANR).

### Awards and distinctions

- 2025 Supervisor of A. Braun, who received **TDS 2025 best student paper award** for the paper co-authored with J. Auriol and L. Brivadis entitled *Stabilization of a Chain of Three Hyperbolic PDEs using a Time-Delay Representation* and presented at the 19<sup>th</sup> IFAC workshop on time-delay systems, Gif-sur-Yvette, France, 2025.
- 2025 Supervisor of G. Velho, who was nominated **TDS 2025 best student paper award** for the paper co-authored with J. Auriol and R. Bonnali entitled *Stabilization and Optimal Control of a Multi Input-Delayed SDE System* and presented at the 19<sup>th</sup> IFAC workshop on time-delay systems, Gif-sur-Yvette, France, 2025.
- 2023 Supervisor of J. Redaud, who received the **Chancellerie Ph.D. award**.
- 2023 Supervisor of J. Redaud, who received the **best Ph.D. award** of the GDR MACS.
- 2022 Supervisor of J. Redaud, who received an accessit for the **Ph.D. award** of the doctoral school STIC of Université Paris Saclay.

- 2021 Supervisor of J. Redaud, who received **TDS 2021 best student paper award** for the paper co-authored with J. Auriol and S.-I. Niculescu entitled *Observer design for a class of delay systems using a Fredholm transform* and presented at the 16<sup>th</sup> IFAC workshop on time-delay systems, Guangzhou, China, 2021.
- 2020 Recipient of the **Prime d'Excellence Scientifique (PES)**. *Also known as Prime d'Encadrement Doctoral et de Recherche, the PES is awarded for 4 years.*
- 2018 Finalist for the **best Ph.D. award** of the GDR MACS and Club E3A.
- 2017 **Outstanding Reviewer** for the journal *Automatica*.

## Fellowships and grants

- 2024-2029 PI of the **ANR JCJC PANOPLY** on the practical control of networks of hyperbolic systems (250 k€).
- 2024-2029 Member of the **CNRS Joint Research Program in Africa SPECTRE** on the effect of delays on Partial Differential Equations (300 k€).
- 2025-2027 Coordinator of the **H-Code project ASIEDIE** (5k€)
- 2023-2025 Member of the **H-Code project Vibro** (7k€).
- 2023-2025 Member of the **H-Code project ClaControl** (7k€).
  - Collaboration with NeuroPsi for the control of Clauastro-Cortical Oscillations.
- 2023 Member of the **H-Code project Spectre** (10k€).
- 2023 PI of the **CNRS Emergence project AURA** (7k€, 2 papers published).

## Supervision of MSc, Ph.D. students and postdoctoral fellows

### Ph.D students:

- 2024-2027 A.-T. CLABAUT (50% with G. MAZANTI), *Reduced-Complexity Reservoir Computing via Time-delay approaches*.
- 2024-2027 A. BRAUN (50% with L. BRIVADIS), *Practical control of networks of Partial Differential Equations*.
  - A. BRAUN received the best student paper award during the 19<sup>th</sup> IFAC workshop on time-delay system.
- 2022-2025 G. VELHO (40% with R. BONALLI and I. BOUSSAADA), *Efficient and reliable control of coupled Stochastic and PDEs*. Led to 2 journal and 2 conference papers.
  - I obtained a derogation to the habilitation (HDR) to be the main supervisor.
  - G. VELHO was nominated for the best student paper award during the 19<sup>th</sup> IFAC workshop on time-delay system.
- 2020-2023 J. REDAUD, *Robust control of linear hyperbolic PDEs with a chain structure*. Led to 4 journal and 8 conference papers, and 1 book chapter.
  - I obtained a derogation to the habilitation (HDR) to be the supervisor.
  - Dr. REDAUD obtained the best Ph.D. award of the GDR MACS, and the best student paper award during the 16<sup>th</sup> IFAC workshop on time-delay system.
  - Dr. Redaud obtained the Chancellerie Ph.D. award.

### Postdoctoral fellows:

- 2025-2026 R. ORTIZ, *Controller tuning for hyperbolic systems*. Led to 1 journal submission.
- 2023-2024 I. BALOGOUN (40% with G. MAZANTI and I. BOUSSAADA), *Certified stabilization of PDEs with prescribed solutions decay rate*. Led to 1 journal paper.
- 2021-2022 L. BRIVADIS (50% with A. CHAILLET), *Adaptive control of neural fields. Application to Parkinson's disease*. Led to 2 journal and 1 conference papers.
  - Dr. BRIVADIS has now been hired as CNRS Researcher in L2S.

### MSc students:

- 2026 A. RAUSCHER, Master student in Master Automatique et Traitement du Signal in Paris-Saclay, working on the *Stability Analysis for Integral Difference Equations*.
- 2025 A.-T. CLABAUT, Master student in Master Mathématiques et applications in Jussieu, working on the *Reduced-Complexity Reservoir Computing via Time-delay approaches*.
- 2025 A. HADDOUCHE, Master student in Master Mathématiques appliquées in Université de Lyon, working on the *Optimal sensor placement for neural fields*.
- 2024 A. BRAUN, Master student in Master Mathématiques et applications in Jussieu, working on the *Stabilization of a class of Integral Difference Equations*.

- 2023 L. P. NJOUA DONGMO, Master student in Master ATSI, working on the *Smart traffic manager for speed harmonization and stop-and-go waves mitigation dedicated to connected autonomous vehicles*.
- 2021-2024 Y.-I. GAMRANI, Master student in CentraleSupélec (Parcours Recherche), working on the *Development of a numerical toolbox for the control of PDEs*.
- 2017-2018 P.-F. MASSIANI, Master student in Ecole des Mines working on *Parameters estimation in the Rijke tube*.
- 2016-2017 H. MENOUE, Master student in Ecole des Mines working on *Passive vibration damping in a washing machine with a Crone control*.

## Invited presentations

Selection over 25 presentations given since 2016.

- 2024 *Recent Contributions on the Stabilization of Networks of Hyperbolic Systems*, 20 mins invited talk for the IEEE CDC workshop *Control and Adaptation: Imagine What's Next* in the honour of M. KRSTIC.
- 2024 *Stick slip vibrations in drilling: modeling, estimation, avoidance*, 30 mins invited talk at the 6th Colloquium on Deep Drilling 2024.
- 2024 *Stabilization of systems of coupled hyperbolic PDEs and characterization of their ISS properties using Lyapunov functions*, Input-to-State Stability and its applications (one-hour virtual seminar).
- 2024 *Contributions on the Stabilization of Networks of Hyperbolic Systems*, 1h invited talk given during several prestigious seminars: ODISSE workshop (Toulouse), Chalmers University (Gothenburg), GISRe (online mexican seminar), Control seminars of Paris-Jussieu (France).
- 2023 *Some insights on the practical control of hyperbolic systems*, plenary speaker for the *2023 Control Theory & Inverse Problems* (Tunisia).

## Major collaborations

- Prof. M. KRSTIC (University of San Diego, USA), 4 joint papers on the *control of traffic networks*.
- Dr D. BRESCH-PIETRI (MinesParis, France), 4 joint papers on the *Lyapunov analysis for neutral time-delay systems*.
- Dr. F. BRIBIESCA-ARGOMEDO (INSA Lyon, France), 12 joint publications mostly on *control of networks of Partial Differential Equations*.
- Dr N. KAZEMI (UQAM, Canada), 10 joint papers on *machine learning-based estimation of drilling parameters, and seismic-while drilling estimation techniques*.
- Prof. Y. LE GORREC (FEMTO-ST, France), 3 joint papers on *performance specifications for infinite-dimensional systems*.

## List of publications

All the articles are available on HAL.

### Journal Papers with reviewing committee

- J45** W. Michiels, [J. Auriol](#), F. Bribiesca-Argomede, *On the filtered spectral abscissa for delay-difference equations and its role in the boundary control of hyperbolic PDEs*, SIAM Journal on Control and Optimization, 2026
- J44** [J. Auriol](#), *State-feedback stabilization of  $2 \times 2$  hyperbolic systems with distributed actuation*, SIAM Journal on Control and Optimization, 2026
- J43** D. Bresch-Pietri, [J. Auriol](#), *Existence and uniqueness of the solution to a class of Fredholm Integral Equations related to Difference Equations*, IEEE L-CSS with joint presentation to IEEE American Control Conference, New Orleans, 2025.
- J42** Y. Zhang, [J. Auriol](#), H. Yu, *Operator Learning for Robust Stabilization of Linear Markov-Jumping Hyperbolic PDEs*, Automatica, 2025.
- J41** G. Velho, [J. Auriol](#), R. Bonalli, *A Gradient Descent-Ascent Method for Continuous-Time Risk-Averse Optimal Control*, Systems and Control Letters, 2025.
- J40** [J. Auriol](#), H. Lhachemi, *Boundary Control of Transport-Reaction-Diffusion Cascade with Simultaneous In-Domain and Boundary Couplings*, IMA Journal of Mathematical Control and Information, 2025.
- J39** N. Espitia, [J. Auriol](#), *Event-triggered gain scheduling of  $2 \times 2$  linear hyperbolic PDEs with time and space varying coupling coefficients*, Automatica, 2025
- J38** M. Lamarque, [J. Auriol](#), D. Bresch-Pietri, *Converse Lyapunov Theorem for Input-to-State Stability of Linear Integral Difference Equations*, Automatica, 2025

- J37** [J. Auriol](#), A. Braun, M. O. Amirat, M. Bajodek, *Underactuated boundary control of a linearized Saint-Venant equation*, IMA Journal of Mathematical Control and Information, 2025.
- J36** R. Vazquez, [J. Auriol](#), F. Bribiesca-Argomedo, M. Krstic *Backstepping for Partial Differential Equations*, Automatica, 2025.
- J35** I. Balogoun, [J. Auriol](#), I. Boussaada, G. Mazanati, *A novel necessary and sufficient condition for the stability of  $2 \times 2$  first-order linear hyperbolic systems*, Systems and Control Letters, 2025.
- J34** [J. Auriol](#), *Output-feedback stabilization of an underactuated network of  $N$  interconnected  $n + m$  hyperbolic PDE systems*, IEEE Transactions on Automatic Control, 2024.
- J33** L. P. Njoug Dongmo, [J. Auriol](#), A. Iovine, *Smart traffic manager for speed harmonization and stop-and-go waves mitigation dedicated to connected autonomous vehicles*, IEEE Transactions on Control Systems Technology, 2024.
- J32** Y. Zhang, H. Yu, [J. Auriol](#), M. Pereira, *Mean-Square Exponential Stabilization of Mixed-Autonomy Traffic*, Automatica, 2024.
- J31** G. Velho, [J. Auriol](#), R. Bonalli, I. Boussaada, *Stabilization and Optimal Control of Interconnected SDE - Scalar PDE System*, IEEE L-CSS with joint presentation to IEEE Conference on Decision and Control, Milan, 2024.
- J30** [J. Auriol](#), *Stabilization of Integral Delay Equations by solving Fredholm equations*, IEEE L-CSS with joint presentation to IEEE Conference on Decision and Control, Milan, 2024.
- J29** L. Brivadis, A. Chaillet, [J. Auriol](#), *Adaptive control of spatiotemporal delayed neural fields*, Systems and Control Letters, 2024.
- J28** J. Redaud, [J. Auriol](#), Y. Le Gorrec, *In domain dissipation assignment of boundary controlled Port-Hamiltonian systems using backstepping*, Systems and Control Letters, 2024.
- J27** J. Redaud, F. Bribiesca-Argomedo, [J. Auriol](#), *Output regulation and tracking for linear ODE-hyperbolic PDE-ODE systems*, Automatica, 2024.
- J26** L. Brivadis, C. Tamekue, [J. Auriol](#), *A comment on "Robust stabilization of delayed neural fields with partial measurement and actuation" [Automatica 83 (2017) 262-274]*, Automatica, 2023.
- J25** [J. Auriol](#), F. Bribiesca-Argomedo, F. Di Meglio, *Robustification of stabilizing controllers for ODE-PDE-ODE systems: a filtering approach*, Automatica, vol. 147, p.110724, 2023.
- J24** J. Redaud, [J. Auriol](#), S.-I. Niculescu, *Stabilizing Output-feedback control law for Hyperbolic Systems using a Fredholm transformation*, IEEE Transactions on Automatic Control, vol.67 (12), p.6651-6666, 2022.
- J23** [J. Auriol](#), F. Bribiesca-Argomedo, *Observer design for  $n+m$  linear hyperbolic ODE-PDE-ODE systems*, IEEE Control Systems Society letters, vol. .7, p.283-288, with presentation at the IEEE Conference on Decision and Control, Cancun, 2022.
- J22** [J. Auriol](#), S. Kong, D. Bresch-Pietri, *Explicit Prediction-based Control for Linear Difference Equations with Distributed Delays*, IEEE Control Systems Society letters, with presentation at the IEEE Conference on Decision and Control, Cancun, 2022.
- J21** [J. Auriol](#), I. Boussaada, R. Shor, H. Mounier, S.-I. Niculescu, *Comparing advanced control strategies to eliminate stick-slip oscillations in drillstrings*, IEEE Access, vol. 10, p.10949-10969, 2022.
- J20** N. Espitia, [J. Auriol](#), H. Yu and M. Krstic, *Traffic flow control on cascaded roads by event-triggered output-feedback*, International Journal of Robust and Non-linear Control (IJRNC), 2022.
- J19** H. Yu, [J. Auriol](#), M. Krstic, *Simultaneous Downstream and Upstream Output-Feedback Stabilization of Cascaded Freeway Traffic*, Automatica, vol. 136, p.110044 2022.
- J18** [J. Auriol](#), D. Bresch-Pietri, *Robust state-feedback stabilization of an underactuated network of interconnected  $n + m$  PDE systems*, Automatica, vol. 136, pp.110040, 2022.
- J17** J. Redaud, [J. Auriol](#), S.-I. Niculescu, *Output-feedback control of an underactuated network of interconnected hyperbolic PDE-ODE systems*, Systems and Control Letters, vol. 154, p.104984, 2021.
- J16** [J. Auriol](#), N. Kazemi, S.-I. Niculescu, *Sensing and computational frameworks for improving drill-string dynamics estimation*, Mechanical Systems and Signal Processing, vol. 160, p.107836, 2021.
- J15** N. Kazemi, S. Nejadi, [J. Auriol](#), J. Curkan, R. Shor, K. Innanen, S. Hubbard, I. Gates, *Advanced sensing and imaging for efficient energy exploration in complex reservoirs*, Energy Report, vol. 6, p.3104-3118, 2020.
- J14** [J. Auriol](#), U.J.F. Aarsnes, F. Di Meglio, R. Shor, *Robust control design of under-actuated  $2 \times 2$  PDE-ODE-PDE systems*, IEEE Control Systems Society letters, vol. 5, no 2, p.469-474, with presentation at the IEEE Conference on Decision and Control, Jeju Island, Korea, 2020.
- J13** S. Najedi, N. Kazemi, J.A. Curkan, [J. Auriol](#), P.R. Durkin, S.M. Hubbard, K.A. Innanen, R.J. Shor, I.D. Gates, *Look ahead of the bit while drilling: potential impacts and challenges in the McMurray Formation*, SPE Journal, vol. 25, no 05, p.2194-2205, 2020.
- J12** [J. Auriol](#), *Output feedback stabilization of an underactuated cascade network of interconnected linear PDE systems using a backstepping approach*, Automatica, vol. 117, 2020.
- J11** [J. Auriol](#), R.J. Shor, U.J.F. Aarsnes, F. Di Meglio, *Closed-loop toolface control with the bit off-bottom*, Journal of Process Control, vol. 90, p.35-45, 2020.

- J10** [J. Auriol](#), F. Di Meglio, *Robust output feedback stabilization for two heterodirectional linear coupled hyperbolic PDEs*, Automatica, vol. 115, p.108896, 2020.
- J9** [J. Auriol](#), N. Kazemi, R.J. Shor, K.A. Innanen, I.D. Gates, *A sensing and computational framework for estimating the seismic velocities of rocks ahead of the drill bit*, IEEE Transactions on Geoscience and Remote Sensing, vol. 58, no 5, p.3178-3189, 2019.
- J8** U.J.F. Aarsnes, [J. Auriol](#), F. Di Meglio, R.J. Shor, *Estimating friction factors while drilling*, Journal of Petroleum Science and Engineering, vol. 179, p.81-91, 2019.
- J7** D. Bou Saba, F. Bribiesca-Argomedo, [J. Auriol](#), M. Di Loreto, F. Di Meglio, *Stability analysis of linear  $2 \times 2$  hyperbolic PDEs using a backstepping transform*, IEEE Transactions on Automatic Control, vol. 65, no 7, p.2941-2956, 2019.
- J6** [J. Auriol](#), K. A. Morris, F. Di Meglio, *Late-lumping backstepping control of partial differential equations*, Automatica, vol. 100, p.247-259, 2019.
- J5** [J. Auriol](#), F. Di Meglio, *An explicit mapping from linear first order hyperbolic PDEs to neutral systems*, Systems and Control Letters, vol. 123, p.144-150, 2019.
- J4** [J. Auriol](#), F. Bribiesca-Argomedo, D. Bou Saba, M. Di Loreto, F. Di Meglio, *Delay-robust stabilization of a hyperbolic PDE-ODE system*, Automatica, vol. 95, p.494-502, 2018.
- J3** [J. Auriol](#), U.J.F. Aarsnes, P. Martin, F. Di Meglio, *Delay-robust control design for two heterodirectional linear coupled hyperbolic PDEs*, IEEE Transactions on Automatic Control, vol. 63, no 10, p.3551-3557, 2018.
- J2** [J. Auriol](#), F. Di Meglio, *Two-sided boundary stabilization of heterodirectional linear coupled hyperbolic PDEs*, IEEE Transactions on Automatic Control, vol. 63, p.2421-2437, 2018.
- J1** [J. Auriol](#), F. Di Meglio, *Minimum time control of heterodirectional linear coupled hyperbolic PDEs*, Automatica, vol. 71, p.300-307, 2016.

#### Conference Papers with reviewing committee

- C40** G. Velho, [J. Auriol](#), R. Bonalli, *A Gradient Method for Risk Averse Control of a PDE-SDE Interconnected System*, European Control Conference, Reykjavík, 2026.
- C39** G. Velho, [J. Auriol](#), I. Boussaada, R. Bonalli, *Optimal Control of an Interconnected SDE - Parabolic PDE System*, IEEE Conference on Decision and Control, Rio de Janeiro, 2025.
- C38** G. Velho, [J. Auriol](#), I. Boussaada, R. Bonalli, *Stabilization and Optimal Control of a Multi Input-Delayed SDE System*, joint SSSC, TDS, COSY, Gif-sur-Yvette, France, 2025.
- C37** A. Braun, [J. Auriol](#), L. Brivadis, *Stabilization of a Chain of Three Hyperbolic PDEs using a time-delay representation*, joint SSSC, TDS, COSY, Gif-sur-Yvette, France, 2025. **Best student paper award.**
- C36** Y. Zhang, [J. Auriol](#), H. Yu, *Neural-Operator Control for Traffic Flow Models with Stochastic Demand*, 5th IFAC/IEEE-CSS Workshop on Control of Systems Governed by Partial Differential Equations, Beijing, 2025.
- C35** M. O. Amirat, V. Andrieu, [J. Auriol](#), M. Bajodek, C. Valentin, *Boundary feedback control of a  $2 \times 2$  weakly hyperbolic system: Lyapunov-based approach*, 5th IFAC/IEEE-CSS Workshop on Control of Systems Governed by Partial Differential Equations, Beijing, 2025.
- C34** [J. Auriol](#), N. Espitia, *Event-triggered gain scheduling of  $2 \times 2$  linear hyperbolic PDEs with time and space varying coupling coefficients*, IEEE Conference on Decision and Control, Milan, 2024.
- C33** [J. Auriol](#), N. Kazemi Nojadedh, *Stick slip vibrations in drilling: modeling, estimation, avoidance*, 6th International Colloquium on Nonlinear Dynamics and Control of Deep Drilling Systems, 2024.
- C32** M. O. Amirat, V. Andrieu, [J. Auriol](#), M. Bajodek, C. Valentin, *Stability analysis of a class of  $2 \times 2$  triangular hyperbolic systems*, 4th IFAC Conference on Modelling, Identification and Control of nonlinear systems, 2024
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