

# C U R R I C U L U M V I T A E



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## • Professional experience

- Oct 2013     **CNRS Research Scientist**  
present     MINES ParisTech, Centre des Matériaux (Évry, France)  
Mechanics and physics of contact and friction, numerical methods, micro plasticity
- Apr 2012     **Postdoctoral fellow**  
Sept 2013     MINES ParisTech, Centre des Matériaux (Évry, France)  
Topic: coupling discrete dislocation dynamics with the finite element method  
Advisers: Georges Cailletaud, Frédéric Feyel
- Feb 2011     **Postdoctoral fellow**  
Mar 2012     EPFL, Computation Solid Mechanics Laboratory (Lausanne, Switzerland)  
Topic: Research on the origin of friction (*ERCstg UFO-240332*)  
Adviser: Jean-François Molinari
- Apr 2006     **Researcher, Corning Scientific Center** (St-Petersburg, Russia)  
Sept 2007     Subject: optimization of heating and cooling schedules for ceramic structures.

## • Education

- Mar 2011     **Ph.D. in Mechanics**  
MINES ParisTech, Centre des Matériaux  
Thesis: *Computational contact mechanics: geometry, detection and numerical techniques*  
Thesis advisers: Georges Cailletaud, Frédéric Feyel
- Jun 2007     **Master of Science in Applied Mechanics (honorable mention)**  
Jun 2005     **Bachelor of Science in Applied Mechanics (honorable mention)**  
St Petersburg Polytechnical University, Department of Physics and Mechanics  
MSc thesis: *Continuum damage mechanics: phenomenological description and numerical simulation of damage accumulation in quasi-brittle materials*  
BSc thesis: *Continuum damage mechanics: numerical simulations using coupled approach*  
Theses advisers: Artem S. Semenov, Boris E. Melnikov
- Jun 2001     **High School**  
Saint-Petersburg Lyceum of Physics and Mathematics FML 239, Russia  
Alumni: G. Perelman and S. Smirnov (Fields medals 2006, 2010)

## • Research interests

Solid mechanics. Numerical methods. Mechanics and physics of contact and friction. Multiscale and multiphysical mechanics of materials. Computational tribology. Surface roughness. Nonlinear dynamics. Architected materials. Finite and Boundary Element Methods.

## • Awards and distinctions

- CNRS Bronze Medal, 2018.
- French CNRS Scientific Premium of Excellence attributed for 4 years, 2016-2020.
- Ranked 1<sup>st</sup> among  $\approx 100$  candidates in CNRS concours for research scientist position, 2013.
- [Prix Paul Caseau for the best PhD thesis in Modeling and Numerical Simulations](#) Academy of Technology and Electricité de France, France, 2012.
- [Finalist in the selection for the ECCOMAS PhD award](#), 2012.
- [PhD award, The French Computational Structural Mechanics Association \(CSMA\)](#), 2012.
- Government grant for best master theses, 2006-2007.
- Leonard Euler's Stipendium (DAAD) in damage mechanics of quasi-brittle materials, 2004-2005.
- Participation in National Olympiad in Strength of Materials, Saransk, Russia, 2003.
- 1<sup>st</sup> place in St Petersburg Olympiad in Strength of Materials, St Petersburg, Russia, 2003.

## • Teaching

*At MINES ParisTech*

- “Finite Element Method”, tutor of mini-projects, 2008-2010.
- “Nonlinear Computational Mechanics”, tutor of mini-projects and lecturer\*, 2009, since 2014\*.
- “Short Course on Contact Mechanics and Tribology”, tutor of mini-projects and lecturer, 2010.
- “Mechanics of Solid Materials”, tutor of experimental mini-projects, since 2013.
- “Continuum Solid Mechanics”, tutor, since 2015.
- “Multiscale Simulations of Materials and Structures”, lecturer and tutor, 1 week master course, since 2016.
- “Contact Mechanics and Elements of Tribology”, lecturer and tutor, 1 week master course, since 2016.
- “Computational Approach to Micromechanical Contacts”, lecturer and tutor, 1 week special course, 2017.

*Exterior*

- “Contact Mechanics and Elements of Tribology”, lecturer, master course, St Petersburg Polytechnic University, Russia, April 2016.

## • Institutional and other responsibilities

- 2017-present: Member of the creation committee of a new Overlay Journal in Mechanics
- 2017-present: Member of the committee CSMA Juniors, The French Association for Computational Mechanics, junior section (under 40)
- 2014-present: Member of the PhD recruitment committee.
- 2013-2018: Organizer of “Club Rama”: bimonthly meeting of users of the computer cluster.
- 2013-2017: Responsible for research group's [web-page](#).

## • Scientific stays

- Guest at Peterhouse, University of Cambridge, February 2017.
- Invited scholar, Computational Solid Mechanics Laboratory, EPFL, Switzerland, (1 month) 2014, (1 month) 2015.
- Invited scholar, TriboLab, Politecnico di Bari, Italy, (1 week) January 2014.
- Exchange student (DAAD program), TU Dresden, Germany, (1 month) December 2004.

## • External committees

**Licentiate thesis:** Francesc Pérez Ràfols “Modelling and Numerical Analysis of Leakage Through Metal-to-Metal Seals” (April 14, 2016, Luleå University of Technology, Luleå, Sweden)

**Master project:** Benjamin Paccaud “Elasto-plastic normal contact between representative rough surfaces” (July 14, 2015, EPFL, Switzerland)

## • Organization of conferences, symposia, seminars

- 3rd CSMA Workshop for young researchers, Giens, France, May 2019
- 2nd CSMA Workshop for young researchers, Gif-sur-Yvette, France, March 2018  
<https://csma-juniors.sciencesconf.org/>
- 1st CSMA Workshop for young researchers, Giens, France, May 2017
- “Micro/Nanoscale Modelling for Tribology”, CECAM-Lorentz Workshop, Leiden, Netherlands, January-February 2017 <https://tribomodels2017.sciencesconf.org/>
- “Alan Needleman 70s Symposium”, Ecole des Mines, Paris, France, August 2014

## • Review activities

### Journals (103):

Physical Review E (11), International Journal of Solids and Structures (8), Tribology International (7), ASME Journal of Tribology (7), Tribology Letters (6), Physical Review Letters (5), Journal of Engineering Tribology (5), Computer Methods in Applied Mechanics and Engineering (4), Wear (4), Meccanica (3), Nonlinear Dynamics (3), Physical Review B (2), Mechanics and Industry (2), Metallurgical Research and Technology (2), Journal of the Mechanics and Physics of Solids (2), Journal of Nuclear Materials (2), MDPI Applied Sciences (2), Modelling and Simulation in Materials Science and Engineering (2), Advanced Modeling and Simulation in Engineering Sciences (1), Computational Mechanics (1), Scientific Reports (1), Journal of Engineering Mechanics (1), Applied Surface Science (1), Tribology Transactions (1), MDPI Metals (1), MDPI Machines (1), Zeitschrift fur Angewandte Mathematik und Mechanik (1), Computational Materials Science (1), MDPI Materials (1), International Journal for Numerical Methods in Engineering (1), Journal of the Mechanical Behavior of Biomedical Materials (1), Journal of Mechanics of Materials and Structures (1), The Journal of Strain Analysis for Engineering Design (1), Surface Review and Letters (1), SAGE Journal of Mechanical Engineering Science (1), Applied Physics (1), Materials Research Letters (1), ASME Journal of Applied Mechanics (1), Computers and Structures (1), International Journal of Applied Mechanics (1), Smart Materials and Structures (1), The Journal of Adhesion (1), Biomimetics (1), Industrial Lubrication and Tribology (1)

**Professorship reviews:** Swiss National Science Foundation (1)

**Research proposals:** Hungarian Scientific Research Fund OTKA (1), NWO, Netherlands Organisation for Scientific Research (1)

**Conference paper reviews:** 21st International Conference on Wear of Materials 2017 (1), IEEE Holm Conference on Electric Contact 2016 (1)

**Conference scientific committees (2):** CSMA conference, Giens, May 2015; CSMA conference, Giens, May 2017;

## • Supervision

### Internship students:

- Olga Trubienko (MINES, 2008), Computational Contact Mechanics.
- Olga Zinovieva (MINES, 2012), Plasticity induced Roughness.
- Fadoua Majid (MINES & Schneider, 2015-2016), Electric contactors.
- Amine Saidi (MINES & Safran Tech, 2018-2019), Simulation of fretting wear.

### Co-supervision of graduate students:

- Julian Durand (MINES, 2009-2010), Elasto-plastic rough contact.
- David S. Kammer (EPFL, 2011-2012), Dynamic sliding.
- Dmitry Tkachik (MINES & NTNU, Norway, 2012-2016), Wear of drilling tools.
- Amandine Sergeant-Boy (IPGP, Paris, 2013-2016), Glacial earthquakes.
- Matti Lindroos (TUT & TWC, Finland, 2014), Thermo-mechano-metallurgical wear model.
- Basava R. Akula (MINES & Safran, 2015-2018), Parallel mortar-based contact algorithms.
- Robin Lethiecq (MINES & CEA-Leti, 2015-2018), Textile embedded chip on wire.
- Takahiro Sakimoto (MINES, 2015-2017), Modeling DWTT for high-strength steels.
- Andrei Shvarts (MINES, 2015-2018), Fully coupled FE framework for fluid/contact interface.
- Paolo Cinat (IMT Lucca, Italy, 3 months stay, 2016), Sealing problems.

- Aurélien Fouque (MINES & SUPELEC & Schneider Electric, 2016-2019), Electric arc.
- Pauline Bonnet (IPGP & ENSAM & MINES, 2017-2020), Glacial earthquakes.

#### Co-supervision of postdoctoral fellows:

- Ming Liu (MINES, 2012-2013), Indentation analysis.
- Ayaovi Dzifa Kudawoo (MINES, 2012-2013), Computational contact.
- Frederick S. Mballa Mballa (LaSIPS: MINES & SUPELEC, 2013-2015), Electric contact.
- Dmitry Tkalich (MINES, 2016-2017), Microstructural mechanics of cemented tungsten carbides.

### • Major collaborations

- Mechanics of rough contact: G. Anciaux, J.F. Molinari (EPFL, Lausanne, Switzerland)
- Microplasticity: G. Cailletaud, S. Forest, H. Proudhon (MINES, France)
- Electric contact: S. Noël, F. Houzé (Supelec, France), G. Cailletaud (MINES, France)
- Computational contact: J. Vignollet (Safran-Tech, France)
- Glacial earthquakes: A. Mangeney (IPGP, Paris, France), O. Castelnaud (ENSAM-Paris, France)
- Friction dynamics: D.S. Kammer (ETH Zurich, Switzerland)

### • Skills and personal information

**Computer skills:** C/C++, MPI, OpenMP, Python, FEA and CAE software.

**Language skills:** Russian (mother tongue), English (proficient), French (proficient).

**Hobbies:** photography  $\cup$  astronomy, chess, rock climbing.

**Personal:** married and have three wonderful children.

### • Publications in peer-reviewed journals (24+3)

- [1] V.A. Yastrebov, G. Cailletaud, F. Feyel, *A local contact detection technique for very large contact and self-contact problems: sequential and parallel implementations*, in G. Zavarise and P. Wriggers, ed., Trends in Computational Contact Mechanics ser. Lecture Notes in Applied and Computational Mechanics, 58:227–251 (2011). doi: [10.1007/978-3-642-22167-5\\_13](https://doi.org/10.1007/978-3-642-22167-5_13)
- [2] V.A. Yastrebov, J. Durand, H. Proudhon, G. Cailletaud, *Rough surface contact analysis by means of the Finite Element Method and of a new reduced model*, Comptes Rendus Mecanique, 339:473–490 (2011). doi: [10.1016/j.crme.2011.05.006](https://doi.org/10.1016/j.crme.2011.05.006)
- [3] D.S. Kammer, V.A. Yastrebov, P. Spijker, J.F. Molinari, *On the propagation of slip fronts at frictional interfaces*, Tribology Letters, 48:27–32 (2012). doi: [10.1007/s11249-012-9920-0](https://doi.org/10.1007/s11249-012-9920-0), arXiv: [arxiv.org/abs/1107.6025](https://arxiv.org/abs/1107.6025)
- [4] V.A. Yastrebov, G. Anciaux, J.F. Molinari, *Contact between representative rough surfaces*, Physical Review E, 86:035601 (2012). doi: [10.1103/PhysRevE.86.035601](https://doi.org/10.1103/PhysRevE.86.035601), arXiv: [arxiv.org/abs/1207.5364](https://arxiv.org/abs/1207.5364)
- [5] P.A. Sabnis, S. Forest, N.K. Arakere, V.A. Yastrebov, *Crystal plasticity analysis of cylindrical indentation on a Ni-base single crystal superalloy*, International Journal of Plasticity, 51:200–217 (2013). doi: [10.1016/j.ijplas.2013.05.004](https://doi.org/10.1016/j.ijplas.2013.05.004)
- [6] A.M. Aragon, V.A. Yastrebov, J.F. Molinari, *A constrained-optimization methodology for the detection phase in contact mechanics simulations*, International Journal for Numerical Methods in Engineering, 96:323–338 (2013). doi: [10.1002/nme.4561](https://doi.org/10.1002/nme.4561)
- [7] D.S. Kammer, V.A. Yastrebov, G. Anciaux, J.F. Molinari, *The existence of a critical length scale in regularised friction*, Journal of the Mechanics and Physics of Solids, 63:40–50 (2014). doi: [10.1016/j.jmps.2013.10.007](https://doi.org/10.1016/j.jmps.2013.10.007), arXiv: [arxiv.org/abs/1402.3043](https://arxiv.org/abs/1402.3043)
- [8] V.A. Yastrebov, M. Fischlschweiger, G. Cailletaud, T. Antretter, *The role of phase interface energy in martensitic transformations: a lattice Monte-Carlo simulation*, Mechanics Research Communications, 56:37–41 (2014). doi: [10.1016/j.mechrescom.2013.11.006](https://doi.org/10.1016/j.mechrescom.2013.11.006), arXiv: [arxiv.org/abs/1401.5510](https://arxiv.org/abs/1401.5510)
- [9] V.A. Yastrebov, G. Anciaux, J.F. Molinari, *The contact of elastic regular wavy surfaces revisited*, Tribology Letters, 56:171–183 (2014). doi: [10.1007/s11249-014-0395-z](https://doi.org/10.1007/s11249-014-0395-z), arXiv: [arxiv.org/abs/1405.2252](https://arxiv.org/abs/1405.2252)
- [10] V.A. Yastrebov, G. Anciaux, J.F. Molinari, *From infinitesimal to full contact between rough surfaces: evolution of the contact area*, International Journal of Solids and Structures, 52:83–102 (2015).

doi: [10.1016/j.ijsolstr.2014.09.019](https://doi.org/10.1016/j.ijsolstr.2014.09.019), arXiv: [arxiv.org/abs/1401.3800](https://arxiv.org/abs/1401.3800)

[11] V.A. Yastrebov, G. Cailletaud, H. Proudhon, F.S. Mballa Mballa, S. Noël, Ph. Testé, F. Houzé. *Three-level multi-scale modeling of electrical contacts sensitivity study and experimental validation*. In Electrical Contacts (Holm), 2015 IEEE 61st Holm Conference, 414-422 (2015).

doi: [10.1109/HOLM.2015.7355130](https://doi.org/10.1109/HOLM.2015.7355130)

[12] V.A. Yastrebov, *Sliding without slipping under Coulomb friction: opening waves and inversion of frictional force*, Tribology Letters, 62(1):1–8 (2016).

doi: [10.1007/s11249-016-0650-6](https://doi.org/10.1007/s11249-016-0650-6), arXiv: [arxiv.org/abs/1507.07334](https://arxiv.org/abs/1507.07334)

[13] B.L. Boyce, S.L.B. Kramer, T.R. Bosiljevac, E. Corona, ..., V. Chiaruttini, M. Mazière, S. Feld-Payet, V.A. Yastrebov, J. Besson, J.L. Chaboche, ..., *The Second Sandia Fracture Challenge: Predictions of Ductile Failure under Quasi-Static and Moderate-Rate Dynamic Loading*, International Journal of Fracture, 198(1):5-100 (2016). doi: [10.1007/s10704-016-0089-7](https://doi.org/10.1007/s10704-016-0089-7)

[14] D. Tkalich, G. Cailletaud, V.A. Yastrebov, A. Kane, *A micromechanical constitutive modeling of WC hardmetals using finite-element and uniform field models*, Mechanics of Materials, 105:166-187 (2017).

doi: [10.1016/j.mechmat.2016.11.007](https://doi.org/10.1016/j.mechmat.2016.11.007)

[15] V.A. Yastrebov, G. Anciaux, J.F. Molinari, *On the accurate computation of the true contact area in mechanical contact of random rough surfaces*, Tribology International, 114:161-171 (2016)

doi: [10.1016/j.triboint.2017.04.023](https://doi.org/10.1016/j.triboint.2017.04.023), arXiv: [arxiv.org/abs/1701.02727](https://arxiv.org/abs/1701.02727)

[16] D. Tkalich, A. Kane, A. Saai, V.A. Yastrebov, M. Hokka, V.T. Kuokkala, M. Bengtsson, A. From, C. Oelgardt, Ch. Li, *Influence of cemented tungsten carbide microstructure on the wear of percussive drill-bit inserts: Laboratory and Field study*, Wear, 386:106-117 (2017).

doi: [10.1016/j.wear.2017.05.010](https://doi.org/10.1016/j.wear.2017.05.010)[-8pt]

[17] D. Tkalich, V.A. Yastrebov, G. Cailletaud, A. Kane, *Multiscale Modeling of Cemented Tungsten Carbide in Hard Rock Drilling*, International Journal of Solids and Structures, 128:282-295 (2017)

doi: [10.1016/j.ijsolstr.2017.08.034](https://doi.org/10.1016/j.ijsolstr.2017.08.034)

[18] V.A. Yastrebov, G. Anciaux, J.F. Molinari, *The role of the roughness spectral breadth in elastic contact of rough surfaces*, Journal of the Mechanics and Physics of Solids, 107:469-493 (2017).

arXiv: [arxiv.org/abs/1704.05650](https://arxiv.org/abs/1704.05650), doi: [10.1016/j.jmps.2017.07.016](https://doi.org/10.1016/j.jmps.2017.07.016),

[19] A.I. Vakis, V.A. Yastrebov, J. Scheibert, L. Nicola, D. Dini, C. Minfray, A. Almqvist, M. Paggi, S. Lee, G. Limbert ... M. Mueser, M. Ciavarella. *Modeling and simulation in tribology across scales: An overview*, Tribology International, 125:169-199 (2018). doi: [10.1016/j.triboint.2018.02.005](https://doi.org/10.1016/j.triboint.2018.02.005)

[20] A.G. Shvarts, V.A. Yastrebov. *Fluid flow across a wavy channel brought in contact*, Tribology International, 126:116-126 (2018). doi: [10.1016/j.triboint.2018.05.005](https://doi.org/10.1016/j.triboint.2018.05.005)

[21] A.G. Shvarts, V.A. Yastrebov. *Trapped fluid in contact interface*, Journal of the Mechanics and Physics of Solids, 119:140-162 (2018). doi: [10.1016/j.jmps.2018.06.016](https://doi.org/10.1016/j.jmps.2018.06.016)

[22] A. Sergeant, V.A. Yastrebov, A. Mangeney, O. Castelnaud, J.P. Montagner, E. Stutzmann. *Numerical modeling of iceberg capsize responsible for glacial earthquakes*, Journal of Geophysical Research: Earth Surface, 123:3013-3033 (2018). doi: [10.1029/2018JF004768](https://doi.org/10.1029/2018JF004768)

[23] V.A. Yastrebov. *The Elastic Contact of Rough Spheres Investigated Using a Deterministic Multi-Asperity Model*. accepted for publication in Journal of Multiscale Modelling (2018). doi: [10.1142/S1756973718410020](https://doi.org/10.1142/S1756973718410020)

[24] A. Sergeant, A. Mangeney, V.A. Yastrebov, F. Walter, J.-P. Montagner, O. Castelnaud, E. Stutzmann, P. Bonnet, V.J.L. Ralaiarisoa, S. Bevan, A. Luckman *Monitoring Greenland ice-sheet buoyancy-driven calving discharge using glacial earthquakes*. accepted for publication in Annals of Glaciology (2019).

[\*] B.R. Akula, J. Vignollet, V.A. Yastrebov. *Stabilized MorteX method for mesh tying along embedded interfaces* in submission process (2019). arXiv: [arxiv.org/abs/1902.04003](https://arxiv.org/abs/1902.04003)

[★] B.R. Akula, J. Vignollet, V.A. Yastrebov *MorteX method for contact along real and embedded surfaces: coupling X-FEM with the Mortar method*. in submission process (2019). arXiv: [arxiv.org/abs/1902.04000](https://arxiv.org/abs/1902.04000)

[★] V.A. Yastrebov. *Wave-filtering properties of elastically-asymmetric architected materials*. submitted (2017). arXiv: [arxiv.org/abs/1712.06294](https://arxiv.org/abs/1712.06294)

## • Research monographs (1)

[1] V. A. Yastrebov, *Numerical Methods in Contact Mechanics*, ISTE/Wiley, 400 pages, 2013. Including a 60 pages Appendix on a new tensor algebra.

## • Invited talks

### ★ “Contact Mechanics at the Roughness Scale”

VI International Conference on Computational Contact Mechanics, Leibnizhaus Hannover, Germany, July 3-5 2019.

### • “The role of surface roughness in contact and transport phenomena”

School of Civil & Environmental Engineering, Cornell University, Ithaca, USA, October 4, 2018.

### • “The role of surface roughness in contact and transport phenomena”

Sullivan Park, Corning Inc, Corning, USA, October 2, 2018.

### • “The role of surface roughness in contact and transport phenomena”

School of Civil & Environmental Engineering, Cornell University, Ithaca, USA, October 4, 2018.

### • “Contact along virtual interfaces: coupling the X-FEM with the mortar discretization”

7th GACM Colloquium on Computational Mechanics, Stuttgart, Germany, October 12, 2017.

### • “The role of surface roughness in contact and transport phenomena”

Institut Jean le Rond d’Alambert, Paris, France, September 28, 2017.

### • “Micromechanical and transport properties of contact interfaces between rough surfaces”

Laboratoire Modélisation et Simulation Multi Echelle (MSME), Université Paris-Est, Marne-la-Vallée, France, April 20, 2017.

### • “Contact and sealing between solids with rough surfaces: numerical approach”

Institute of Mechanics, Lomonosov State University, Moscow, Russia, November 21, 2016.

### • “Quelques exemples de dynamique non-linéaire dans la mécanique du contact / frottement”

Manifestation du GDR DYNOLIN, DYnamique NON LINéaire, ENSTA ParisTech, Palaiseau, France, October 11, 2016, opening lecture.

### • “Contact between rough surfaces: mechanical and transport phenomena at small scales”

ICTAM 2016: 24th International Congress of Theoretical and Applied Mechanics, Montreal, Canada, August 26, 2016.

### • “Contact between rough surfaces: mechanical and transport phenomena”

Department of Engineering Sciences and Mathematics, Luleå University of Technology, LTU, Luleå, Sweden, April 13, 2016.

### • “Mechanical contact between rough elastic-plastic solids: scale effect in deformation of asperities”

Society of Engineering Science (SES) Technical Meeting, Texas A&M University, USA, October 27, 2015.

### • “Mechanics and physics of rough contact” [\[link\]](#)

Fédération Francilienne de Mécanique, Arts et Métiers ParisTech, Paris, France, May 7, 2015.

### • “Computational contact mechanics: engineering approach”

Centre de Mise en Forme des Matériaux, MINES ParisTech, Sophia-Antipolis, France, April 21, 2015.

- **“A numerical study of the contact between rough surfaces: mechanical and transport phenomena at small scales.”** [\[abstract\]](#)  
Seismology lab, Institut de Physique du Globe de Paris, France, November 25, 2014.
- **“Sealing and percolation of rough surfaces: focus on contact mechanics”** [\[pdf\]](#)  
Workshop “Predictive approach to sealing”, Paris, France, October 13, 2014.
- **“Mechanics of contact between rough surfaces”** [\[pdf\]](#)  
Laboratoire de Mécanique des Structures Industrielles (LaMSID), CNRS-EDF-CEA, Clamart, France, March 20, 2014.
- **“Mechanics of elastic and elasto-plastic contact between rough surfaces”** [\[link\]](#)  
TriboLab, Politecnico di Bari, Italy, January 29, 2014.
- **“Computational contact mechanics with finite elements”** [\[abstract\]](#)  
Laboratoire de Mécanique et Technologie (LMT), ENS Cachan, France, December 5, 2013.
- **“Some recent developments in computational contact mechanics”** [\[abstract\]](#)  
Colloquium of the French Computational Structural Mechanics Association (CSMA), Giens, France, May 16, 2013.
- **“Computational Contact Mechanics: geometry, detection and numerical techniques”**  
PhD Olympiad, ECCOMAS Young Investigators Conference, Aveiro, Portugal, April 25, 2012.
- **“Parallel treatment of contact problems”** [\[abstract\]](#)  
Laboratoire de Mécanique des Structures Industrielles (LaMSID), CNRS-EDF-CEA, Clamart, France, June 28, 2011.

## • Conferences

1. 38th Conference Control Processes and Stability 2007, Saint-Petersburg, Russia, 9-12 April (2007), oral presentation
2. 9e Colloque National en Calcul des Structures, Giens, France, 25-29 May (2009), poster presentation
3. 1st International Conference on Computational Contact Mechanics, Lecce, Italy, 16-18 September (2009), oral presentation
4. IV European Conference on Computational Mechanics, Paris, France, 16-21 May (2010), oral presentation
5. 10eme Colloque National en Calcul des Structures, Giens, France, 9-13 May (2011), oral presentation
6. CECAM: Brittle Fracture at the Atomic Scale, EPFL Lausanne, Switzerland, 16-19 May (2011)
7. Materials Deformation: Fluctuations, Scaling, Predictability, Les Houches, France, 22-27 January (2012), poster presentation
8. EuroMech: New trends in Contact Mechanics, Cargèse, France, 26-31 March (2012), oral presentation
9. ECCOMAS Young Investigators Conference, Aveiro, Portugal, 24-27 April (2012), invited talk
10. 24 Journées Internationales Francophones de Tribologie, Aix-en-Provence, France, 9-11 May (2012), oral presentation
11. Colloque Plasticité, Paris, France, 17-19 April (2013), poster presentation
12. 11e Colloque CSMA, Giens, France, 13-17 May (2013), oral presentation + invited talk
13. 3rd International Conference on Computational Contact Mechanics, Lecce, Italy, 10-12 July (2013), oral presentation
14. 20e Congrès Français de Mécanique, Bordeaux, France, 27-30 August (2013), oral presentation
15. 40th Leeds-Lyon Symposium on Tribology, Lyon, France, 4-6 September (2013), oral presentation
16. Contact Mechanics International Symposium (CMIS), Abu-Dhabi, United Arab Emirates, 3-5 February (2014)

17. 20th European Conference on Fracture, Trondheim, Norway, 30 June-4 July (2014), oral presentation
18. 11th World Congress on Computational Mechanics, Barcelona, Spain, 20-25 July (2014), oral presentation
19. 7th International Conference on Multiscale Materials Modeling, Berkeley, USA, 6-10 October (2014)
20. Predictive approach of sealing, Paris, France, 13 October (2014), invited talk
21. International Workshop on Dislocation Dynamics Simulations, Saclay, France, December 10-12 (2014), poster presentation
22. 18e Rencontre du Non-Linéaire, Paris, France, 17-19 March (2015), poster presentation
23. Contact mechanics and coupled problems in surface phenomena, Lucca, Italy, 30 March - 2 April (2015), oral presentation
24. IV International Conference on Computational Contact Mechanics, Hannover, Germany, 27-29 May (2015), oral presentation
25. 9th European Solid Mechanics Conference, Madrid, Spain, 6-10 July (2015), oral presentation
26. 42nd Leeds-Lyon Symposium on Tribology, Lyon, France, 6-9 September (2015), oral presentation
27. 52nd SES technical meeting, Texas A&M, College Station, TX, USA, 24-27 October (2015), invited presentation
28. CMIS 2016: Contact Mechanics International Symposium, Warsaw, Poland, 11-13 May (2016), oral presentation
29. ICTAM 2016: 24th International Congress of Theoretical and Applied Mechanics, Montreal, Canada, 21-26 August (2016), invited presentation.
30. Micro/Nanoscale Modelling for Tribology, Lorentz Workshop, Leiden, Netherlands, January 30-February 3 (2017), organizer.
31. 6th Biot Conferences on Poromechanics, Ecole des Ponts ParisTech and IFSTTAR, Paris, France, 9-13 July (2017), oral presentation.
32. 44th Leeds-Lyon Symposium on Tribology, Lyon, France, 4-6 September (2017), two oral presentations.
33. 7th GACM Colloquium on Computational Mechanics, Stuttgart, Germany, 11-13 October (2017), invited presentation.
34. Computational Modeling of Complex Materials Across the Scales, ECCOMAS Thematic Conference, 7-9 November (2017), oral presentation.
35. 21e Rencontre du Non-Linaire, Paris, France, 27-29 March (2018), poster presentation.
36. Contact Mechanics International Symposium, Sanctuary of Oropa, Italy, 16-18 May (2018), oral presentation.
37. 10th European Solid Mechanics Conference, Bologna, Italy, 2-6 July (2018), oral presentation.
38. 13th World Congress in Computational Mechanics, New York, USA, 22-27 July (2018), oral presentation.
39. CECAM Workshop "Modeling tribology: friction and fracture across scales", Lausanne, Switzerland, 28-30 January (2019), oral presentation and round table.
  - ★ 14e Colloque CSMA, Giens, France, 13-17 May (2019), poster presentation.
  - ★ VI International Conference on Computational Contact Mechanics, Hannover, Germany, 3-5 July (2019), keynote lecture.
  - ★ Congres Franais de Mecanique, Brest, France, 26-30 August (2019), oral presentation.