

Curriculum vitae

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Research interests

Mathematical fluid mechanics, Turbulence Modeling, Mathematical Oceanography, Functional Analysis, Partial Differential Equations, Fluid Dynamics, Numerical Analysis, Computational Mathematics.

Academic experience

- *2021-present*: Exceptional Class Professor of the Universities, University of Rennes 1(French National Promotion by CNU), France.
- *2009-2021*: First Class Professor of the Universities, University of Rennes 1(French National Promotion by CNU), France.
- *1999-2009*: Second Class Professor of the Universities, University of Rennes 1.
- *1991-1999*: First Class Associate Professor, University of Paris X, France.
- *1990-1991*: Assistant Professor, Ecole Normale Supérieure of Paris, France.
- *1987-1990*: Assistant Professor, Pierre and Marie Curie University (Paris VI), France.
- *1983-1987*: Student at Ecole Normale Supérieure of Saint-Cloud/Fontenay, France.

Education

- *November 1997*: HDR (Ability to conduct researches), Pierre and Marie Curie University (Paris VI), France. Adviser: Jacques-Louis Lions.
- *January 1990*: PhD in Applied Mathematics (Mention très honorable), Pierre and Marie Curie University (Paris VI), France. Adviser: Haïm Brézis.
- *July 1986*: Agregation Examination in Mathematics.
- *June 1985*: DEA of applied mathematics, Pierre and Marie Curie University (Paris VI), France.

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1 Collective responsibilities

- *November 2021-present*: Member of the board of directors of Rennes 1 University.
- *July 2021-present*: Member of the board of directors of the SMAI.
- *June 2017-present*: Member of the maths department council of Rennes 1 University.
- *June 2013-present*: Member of scientific board of the “UFR de mathématiques de l’Université Rennes 1”.
- *September 2017-present*: local correspondent in Rennes of the [SMAI](#) (Société de Mathématiques Appliquées et Industrielles),
- *July 2019-december 2021*: President of teaching and development commission of the UFR of mathematics (Maths department), Rennes 1 University.
- *January 2018-december 2021*: President of the thematic group [GAMNI-SMAI](#).
- *January 2018-december 2021*: Member of the IRMAR scientific committee.
- *June 2013-december 2021*: Head of the IRMAR Mathematical Modeling team, University of Rennes 1.
- *March 2012-december 2021*: Member of scientific board of the ”Laboratoire d’Excellence” (LABEX) Henri Lebesgue (Rennes-Nantes).
- *June 2008-January 2012*: Vice-President of the University of Rennes 1 in charge of the communication.
- *Februar 2005-Februar 2009*: Member of the Mathematics Department council of the University of Rennes 1.
- *October 2003-June 2008*: Member of Mathematics Department committee for computer sciences, University of Rennes 1.
- *October 1999-June 2008*: Member of the selection committee for mechanics of the University of Rennes 1, Vice-President of the committee in 2001-2002.
- *January 2004-January 2007*: External member of the selection committee for mathematics and computer sciences of the University of Corte (France).

- *October 2001-June 2002*: External member of the selection committee for mechanics of the University of Brest (France), Vice-President of the committee.
- *October 1999-March 2002*: Member of the Mathematics Department scientific board of the University of Rennes 1.
- *1999-2002*: Head of the mechanics team of the Mathematics Department of the University of Rennes 1.

2 Direction of Phd Thesis and Master 2 internships

Supervision of PhD students : defended theses

1. [Dinh-Duong NGUYEN](#), “Regular and non regular solutions of the Navier-Stokes equations in the whole space with an eddy viscosity”, *thesis defense : October 2020*. (co-adviser : Luigi Berselli) Current position : post doc Yonsei University, south Korea. Publications associated with the thesis: [[6](#), [11](#), [12](#)]
2. [Benoît PINIER](#), “Application of the theory of similarities in turbulence to the ocean-atmosphere interface”, *thesis defense : February 2019*. (co-adviser : Etienne Mémin) Current position: research engineer, OSUR, Rennes, France. Publications associated with the thesis: [[19](#), [22](#), [23](#)]
3. [Hani ALI](#), “Mathematical study of some turbulence models”, *thesis defense : December 2011*. Current position: CAT Analytics Lead France and Belgium chez Willis Re. Publications associated with the thesis: [[1](#), [2](#), [3](#), [4](#), [5](#)]
4. [Anne-Claire BENNIS](#), “Turbulence models for the oceanic boundary layer”, *thesis defense : November 2008*. Current position: associate professor, University of Caen, France. Publications associated with the thesis: [[7](#), [8](#), [9](#), [10](#)]
5. [Géraldine PICHOT](#), “Modelization and numerical analysis of coupling hydrodynamic net-flow in a cod end net”, *thesis defense : December 2007*. Current position: tenure researcher INRIA Paris. Publications associated with the thesis: [[18](#), [17](#), [20](#), [21](#)]
6. [Julien LEDERER](#), “Sustainability, climatic risks and analysis of RANS equations”, *thesis defense : January 2006*. Current position: Managing Partner at Green Gas Generation, London, United Kingdom. Publications associated with the thesis: [[13](#), [16](#)]
7. [Ronan GUENANFF](#), “Non stationary coupling Navier-Stokes/Euler for the generation and radiations of aerodynamic noises”, *thesis defense : December 2004*. Current position: math teacher in high school. Publications associated with the thesis: [[14](#), [15](#)]

Supervision of PhD students : theses under progress

1. Guillaume LELOUP, “Numerical methods for the coupling of two turbulent fluids”, *Beginning of the thesis : Oct. 2022*.
2. [François LEGEAIS](#), “Turbulent ocean-atmosphere mixing layer”, *Beginning of the thesis : Oct. 2021*.

Direction of master 2 internships

1. 2021/2022, Guillaume LELOUP, *ENS Rennes*.
2. 2020/2021, François LEGEAIS, *University of Rennes 1*.
3. 2016/2017, Ludovic GODARD-CADILLAC, (Student at Ecole de Ponts et Chaussées), *Pierre and Marie Curie University, Paris*.
4. 2015/2016, Clément BONVOISIN, (Student at ENS Cachan), *Pierre and Marie Curie University, Paris*.
5. 2012/2013, Gautier DELANNOY, (Student at ENS Rennes), *University of Rennes 1*.
6. 2008/2009, Hani ALI, *Pierre and Marie Curie University, Paris*.
7. 2006/2007, Laurent HATT (Student Ecole Nationale des Ponts et Chaussées), *Pierre and Marie Curie University, Paris*.
8. 2005/2006, Gilles CANALES (Student ENS Cachan-Bruz), *University of Rennes 1*.
9. 2003/2004, Yves PREAUX, *University of Rennes 1*.
10. 2003/2004, Géraldine PICHOT, *University of Rennes 1*.
11. 2001/2002, Emmanuel GAILLARD, *University of Rennes 1*.
12. 2000/2001, Saddick KADIRI, *University of Rennes 1*.
13. 2000/2001, Stéphanie RUELLAN, *University of Rennes 1*.
14. 1994/1995, Cecile HONORE (student ENS ULM), *Pierre and Marie Curie University, Paris*.
15. 1993/1994, Pamela LANCIANI, *Pierre and Marie Curie University, Paris*.
16. 1992/1993, Sabah BENFIGUIG, *Pierre and Marie Curie University, Paris*.
17. 1990/1991, Richard CROUAU, *Pierre and Marie Curie University, Paris*.
18. 1989/1990, Ana Carpio RODRIGUEZ, *Pierre and Marie Curie University, Paris*.

Postdoctoral Associates Supervised:

- Cedric Ody, 2008-2010

3 Teaching and pedagogical service

Pedagogical responsibilities

Recall that I am since June 2019 President of the teaching and development commission of the UFR of mathematics (Maths department), of the University of Rennes 1.

- In charge of the teaching unit "Mathématiques Générales 2", third year, mathematics, Bachelor degree, University of Rennes 1, Sept 2020-present

- In charge of the teaching unit "Outils Mathématiques 3", second year, Physics, chemistry, engineering, earth science, Bachelor degree, University of Rennes 1, Sept 2014-2018
- In charge of the teaching unit "Mathématiques pour la biologie", First year, Biologic Bachelor degree, University of Rennes 1, Sept 2012-Sept 2014.
- In charge of Fluid Mechanics Section of Mechanical Master of the University of Rennes 1, Oct. 2004-June 2006.
- In charge in Mechanical Bachelor of the Mathematics Department, University of Rennes 1, 1 Oct. 2000-June 2004.
- Organizers of Doctoral courses in the Mathematics Department, University of Rennes 1: P. Orenge, June 2002 (Shallow water and free surfaces); M. Lesieur, June 2001, (Turbulence); W. Layton (Large Eddy Simulation); L. Tartar, June 2000 (H-Measures); F. Murat, January 2000 (Homogeneization).

Courses

Master degree

- 2020- : Partial differential Equations, agrégation de mathématiques, scientific calculus track.
- 2019- : Sobolev spaces and elliptic problems, Mathematical Research Master 2, University of Rennes 1.
- 2017-2018 : Euler and Navier-Stokes equations, Mathematical Research Master 2, University of Rennes 1.
- 2008-2016: Turbulence in Incompressible Viscous Fluids, Master 2 in Modeling and Computing, University of Rennes 1.
- 2012-2014: Incompressible Navier-Stokes Equations, Mathematical Research Master 2, University of Rennes 1.
- 2010-2012: Mathematical Methods for Mechanics, Master 1 in Mechanics, University of Rennes 1.
- 2009-2011, 2005-2006: Navier-Stokes Equations, Mathematical Research Master 2, University of Rennes 1.
- 2008-2011: Numerical Methods for Mechanics, Master in Modelization and Computing, University of Rennes 1.
- 2004-2007: Agregation in Mathematics, Analysis, University of Rennes 1.
- 1999-2007: General Fluid Mechanics and introduction to the Turbulence, Master in Mechanics, University of Rennes 1.
- 1999-2007: Mathematical Methods for Mechanics, Master 1 in Mechanics, University of Rennes 1.

Bachelor degree

- 2020- "General Mathematics", third year Bachelor degree.
- 2019- "Analysis and Probabilities", second year, mathematics, Bachelor degree.
- 2017-2018: "Algèbre et Géométrie", first year mathematics, Bachelor degree.
- 2014-2018: "Outils Mathématiques 3", second year, Physics, chemistry, engineering, earth science, Bachelor degree, University of Rennes 1.
- 2014-2017: "Analyse 1", first year mathematics, Bachelor degree
- 2012-2015: First year course in Mechanics, Bachelor of Mathematics, University of Rennes 1.

- 2012-2014: First year course in Mathematics, Bachelor of Biology, University of Rennes 1.
- 2008-2011: Linear Algebra 1, First Year Calculus Course for student in sciences, University of Rennes 1.
- 2005-2007: CAPES in Mathematics, University of Rennes 1.
- 1999-2004: General Analysis for mechanics, Bachelor in Mechanics, University of Rennes 1.
- 1991-1999: Mathematical Analysis and Algebra, Differential Calculus, Bachelor of Mathematics for Social Sciences (MASS), University of Paris X.
- 1991-1999: Mathematics for economy, Bachelor of Economic sciences, University of Paris X.
- 1987-1990: Differential equations and Partial differential equations for geophysicists, Pierre and Marie Curie University.

4 Visiting positions

- *December 2022*: Department of Mathematics, University of Sevilla, Spain, 1 week.
- *October 2022*: Department of Mathematics, University of Pisa, Italia, 1 week.
- *November 2018*: Department of Mathematics, University of Pisa, Italia, 1 week.
- *March 2018*: Department of Mathematics, Virginia Tech, USA, 1 week.
- *June 2017*: Dpt. of applied maths, University of Pisa, Italia, 2 weeks.
- *June 2014*: Dpt. Ecuaciones Diferenciales y Análisis Numérico, University of Sevilla, Spain, 2 weeks.
- *August-September 2013*: Fudan University, School of mathematical sciences, Shanghai, China, 4 weeks.
- *June 2013*: Dpt. Ecuaciones Diferenciales y Análisis Numérico, University of Sevilla, Spain, 2 weeks.
- *March 2012*: Fudan University, School of mathematical sciences, Shanghai, China, 3 weeks.
- *May 2011*: Shanghai Jiao Tong University, Department of Mathematics and Institute of Non Linear Sciences, China, 1 month.
- *June 2011, June 2010, June 09, June 08, May 07, May 04, April 03, September 02, September 00, May 1999, June 98, Sept. 97, Sept. 96, June 94*: Dpt. Ecuaciones Diferenciales y Análisis Numérico, University of Sevilla, Spain, The duration of each visit being between 1 and 3 weeks.
- *May 2009, November 2008*: Mathematical Institute, Charles University, Prague, Czech Republic, 1 month.
- *September 2008*: Dipartimento di matematica applicata "Ulisse Dini", Pisa University, Italy, 2 weeks.
- *September 2007*: Weizmann Institute of Mathematical Sciences, Israel, 3 weeks.
- *November 2007, June 06, June 04, June 03, May 01*: Department of Mathematics, University of Pittsburgh, USA, the duration of each visit being about 2 weeks.
- *November 2005*: Department of Mathematics, City University of Hong-Kong, China, 3 weeks.

- *June 2001, June 1999:* Center for Nonlinear Analysis, Carnegie Mellon University, Pittsburgh, USA, 2 weeks.
- *June 2000, June 1995:* Institute of Mechanics, Materials and Civil Engineering (iMMC) & Earth and Life Institute (ELI), Université catholique de Louvain, Belgium, one week.
- *November 1996:* Área de Matemática Aplicada, University of Malaga, Spain, 1 week.
- *April 1995:* University of Delf, Mathematical Dpt, The Netherlands, one week.
- *April 1993:* Ecole Normale Supérieure d'Alger, Algeria, one month.
- *July-August 1992:* TIFR Bangalore, India, 2 months.
- *September 1991:* University of Santa Fe, Argentina, one month.
- *May 1990:* Autonoma University, Maths Dpt, Madrid, Spain, one week.
- *May 1989:* Courant Institute of Mathematical Sciences, NYU, New-York, USA, one week.
- *Februar 1989:* Maths. Dpt, University of Vienna, Austria, one week.

5 Delegations and sabbatical terms

- *Second term 2022/2023.* in delegation to INRIA Rennes.
- *First term 2022/2023.* in delegation to CNRS.
- *Second term 2019/2020.* in delegation to INRIA Rennes.
- *Second term 2018/2019.* in delegation to CNRS.
- *First term 2018/2019.* in delegation to INRIA Rennes.
- *Second term 2013/2014.* in delegation to INRIA Rennes (Centre National de la Recherche en Informatique et en Automatique, France).
- *Second term 2012/2013.* in delegation to INRIA Rennes (Centre National de la Recherche en Informatique et en Automatique, France).
- *Second term 2011/2012.* in delegation to CNRS (Centre National de la Recherche Scientifique, France).
- *First term 2007/2008.* in delegation to CNRS.
- *Second term 2004/2005.* in delegation to CNRS.
- *First term 2004/2005.* sabbatical.

6 Invited Speaker in Conferences, seminar and colloquiums

International Conferences and Congress

1. Sixteenth International Conference, Zaragoza-Pau, on Mathematics and its Applications Jaca, 7-9 September 2022, invited speaker in the session "PDEs and fluid mechanics".
2. Congrès Français de Mécanique, Nantes 29 August, 2 September 2022, invited speaker in the session "Rencontres Mathématiques-Mécanique"
3. Speaker in "Encontro Nacional da Sociedade Portuguesa de Matemática 2021" (EN-SPM2021), held online, between the 12th and 16th of July 2021.

4. XVIII International Conference Zaragoza-Pau on Applied Mathematics and Statistics. Jaca, Spain. September 9-11 2020. Main speaker. (postponed to 2021).
5. 12th International ISAAC Congress, July 29-August 2, Aveiro, 2019, Portugal, invited speaker in the session "Partial Differential Equations with Nonstandard Growth".
6. Time Filters and Predictive Accuracy, May 29-30, 2019, Pittsburgh, USA. Plenary speaker.
7. Kolmogorov Days in Évry 2018, September 26-28, 2018, Évry, France. Plenary speaker.
8. AMS meeting, Denver, Colorado, USA, October 8-9, 2016. Invited speaker in the session "Above and Beyond Fluid Flow Studies".
9. Chaos 2015, Paris, France, May 26–29, 2015. Plenary speaker.
10. Workshop on Numerical Approximation of PDEs, Málaga, Spain, April 20–22, 2015. Plenary speaker.
11. International Conference on Nonlinear and Multiscale Partial, Differential Equations: Theory, Numerics and Applications, Fudan University, Shanghai, China, September 16–20, 2013. Plenary speaker.
12. SIAM Conference on Mathematical and Computational Issues in the Geosciences, symposium Modeling, Analysis and Simulation of Oceanic Flows. Mini Symposium speaker: Modeling, Analysis and Simulation of Oceanic Flows. Long Beach, USA. March 21–24, 2011.
13. SIAM Conference on Mathematical and Computational Issues in the Geosciences. Mini symposium speaker: Modeling and Simulation of Oceanic Flows. Leipzig, Germany. June 15-18, 2009.
14. Wavelets and Turbulence: From Modeling to Computing, Wolfgang Pauli Institute (WPI) Vienna, organizers C. BARDOS and N. MAUSER, Vienna, Austria. March 10-16 2006. Plenary speaker
15. Algerian-French Conference on Non Linear Partial Differential Equations, Tipaza, Algeria. May 23-26 2005. Plenary speaker.
16. European Congress on Computational Methods in Applied Sciences and Engineering, Barcelona, Spain. September 11-14 2000, symposium speaker : Oceanography and Climate.
17. Nato Advanced Study Institute, The Mathematics of Models for Climatology and Environment. Puerto de la Cruz, Tenerife, Spain. Jan. 1995. Organizers : J.I.DIAZ et J.L.LIONS. NATO ASI. Plenary speaker.
18. MECOM 91, Parana, Argentina. September 16-21 1991, Organizer : AMCA. Asociacion Argentina de Mecanica Computacional 3. Plenary speaker.

Seminars, Workshops, Colloquiums and local conferences

- **1989.** University of Vienna (Austria), Leiden University (The Netherlands), Pierre et Marie Curie University (France), Ecole Normale Supérieure de Paris (France), Ecole Polytechnique (France).
- **1990.** University Autonoma Madrid (Spain)
- **1991.** University Paris XI (France), University Paris VI (France), Ecole Normale Supérieure de Paris (France)
- **1992.** TIFR Bangalore (India) Mathematical institute Madras (India)
- **1993.** University Paris VI (France), University of Alger (Algeria), ENS Alger (Algeria)
- **1994.** University Paris VI (France), Université of Chambéry (France), University of Sevilla (Spain), University of Lyon (France)
- **1995.** University of Delft (Netherlands), University of Louvain La Neuve (Belgium), GDR CNRS Couplage d'équations, Brest (France) Université of Sevilla (Spain)
- **1996.** University of Sevilla (Spain), University of Malaga (Spain), GDR CNRS Couplage d'équations, Tunis (Tunisia)
- **1997.** Ecole Normale Supérieure Lyon (France), University of Marseille (France)
- **1998.** INRIA (France), University of Paris X (France), University of Paris VI (France)
- **1999.** Carnegie-Mellon University (Pittsburgh, USA), University of Sevilla (Spain), Université of Rennes 1 (France), Université of Nantes (France), University of Amsterdam (Netherlands), EPFL, Lausanne (Switzerland)
- **2000.** University of Seville (Spain), University of Louvain La Neuve (Belgium), University of Pau (France), GDR CNRS Turbulence, Toulouse (France)
- **2001.** University of Grenoble (France), Pittsburgh University (USA), Carnegie-Mellon University (Pittsburgh, USA)
- **2002.** University of Marseille (France), University of Seville (Spain)
- **2003.** Paris 10 University (France), Pittsburgh University (USA)
- **2004.** Pierre et Marie Curie University, AUM Days, Brest (France) & 2005 Colloquium Dpt of Maths, City U Hong-Kong (China)
- **2006.** Colloquium Pittsburgh University (USA)
- **2007.** Collège de France, Paris (France), Colloquium Weizmann Institute (Israel), Séminaire University of Palestine Jerusalem (Palestine), Colloquium Pittsburgh University (USA)
- **2008.** University of Sevilla (Spain), Colloquium Pisa University (Italy) IRENAV, Brest (France), Conférence Calcul Scientifique et Modélisation Mathématique, Amiens (France), Charles University, Prague (Czech Republic)
- **2009.** Charles University, Praha (Czech Republic) University of Sevilla, Spain
- **2010.** University of Sevilla (Spain)
- **2011.** Shanghai Jiao Tong University (China)
- **2012.** Fudan University, Shanghai (China). Laurent Schwarz Seminar, Ecole Polytechnique (France).
- **2015.** UMPC, Laboratoire Jacques-Louis Lions, Paris (France), GT Méthodes numériques.
- **2016.** University of Pau (France).
- **2016.** University of Caen (France). University of Pisa (Italy).
- **2017.** University of Pisa (Italy).
- **2018.** Virginia Tech (USA), University of Pisa (Italy).
- **2022.** University of Sevilla (Spain)

7 Professional Services

Congress, Conferences and Seminars Organization

1. Co-Organizer of the conference [Ocean-Atmosphere modeling](#), September 2-5, 2019, Rennes (France).
2. Co-organizer of days of [Mathematical 2018 french sciences Academy awards](#), 18-19 December 2018,
3. Member of the steering committee of [WCCM/ECCOMAS 2020](#).
4. Organizer of the mini-symposium: Recent advances in Large Eddy Simulations of turbulent flows. SIAM Conference on Applications of Dynamical Systems, May 19-23, 2013, Snowbird, Utah, (USA).
5. Organizer of the mini-symposium: Non-standard modeling of incompressible flows via Navier-Stokes equations. SIAM Conference on Analysis of Partial Differential Equations, November 14-17, 2011, San Diego CA, (USA).
6. Organizer of the "International Congress in Mathematical Fluid Dynamics 2010" (MFD2010), June 21-24 2010, Rennes (France).
7. Organizer of the Colloquium of the Mathematics Department of the University of Rennes 1, September 2006 - June 2008.
8. Co-organizer of the mechanics seminar of the Mathematics Department of the University of Rennes 1, September 2000 - present.
9. Co-organizer of the congress in Honor of 60 birthday of François Murat, October 4-5 2007.
10. Co-organizer of the symposium "Theoretical Analysis and Numerical Models for Water Flows in Thin Domains", Eccomas 2004, Jyväskylä (Finland).
11. Organizer of the symposium "Oceanography", french congress of numerical analysis, Anglet, June 4-8 2002.

Editorial Activities

- 2002-June 2013: Member of the Editorial Board of "Journal of Turbulence"

- Reviewing and referring: • SIAM Journal on Numerical Analysis • Journal of Mathematical Analysis and Applications • Journal of Scientific computing • Journal of mathematical fluid dynamics • Journal of applied mechanics • International Journal of Computational Methods • Journal of differential equations • Advanced Nonlinear Studies • Mathematical models and methods in applied sciences • Mathematical Modelling and Numerical Analysis • Comptes-Rendus de l'Académie des Sciences de Paris.

Member of various Committees and Juries

- President of the Jury of the Blaise Pascal price, 2018-2020
- President of the Jury of the GAMNI's thesis price, from 2018-2020
- board of examiners in mathematics, Caen University, 2012.
- Member of the Committee of Ecole Centrale Paris for Mathematical Analysis, 1994-2008.
- Member of the Committee HEC Paris for Mathematics, 1990-1993.

PhD and Researches Habilitation (HDR) Referrees and Committees:

- Mohamed Yacine Ben Ali, PhD, President, graduation 24/03/2021, University of Rennes 1.
- Pranav Chandramouli, PhD, President, graduation 19/10/2018, INRIA Rennes.
- Oscar Jarrin, PhD, President, graduation 20/06/2018, LaMME, Evry,
- Charles Pelletier, PhD, Referee, graduation 15/15/2018, LJK Grenoble,
- Cordelia Robinson, PhD, President, graduation 18/12/2015, IRSTEA Rennes,
- Samuele Rubino, PhD, Referee, graduation 23/ 06/ 2014, University of Sevilla.
- Pierre Carcaud, PhD, examiner, graduation 2/06/2014, University of Rennes 1.
- Kodjovi Sodjavi, PhD, President of the committee, graduation 11/03/2013, University of Rennes 1 and IRSTEA of Rennes, France.
- Daniel Priour, HDR, President of the committee, graduation 12/9/2009, University of Brest, France.
- Fabien Dahoumane, PhD, Referee, graduation 11/ 27/ 2009, Pau University, France.
- Taoufik Hmidi, HDR, examiner, graduation 12/10/2008, University of Rennes 1.
- Philippe Druault, HDR, Referee, graduation 12/6/2007, Pierre and Marie Curie University, Paris, France.
- Mounir Saadouni, PhD, Referee, graduation 12/5/2007, Pierre and Marie Curie University, Paris, France.
- Habib Yazidi, PhD, Referee, graduation 01/27/2006, University of Paris 12.
- Sebastien Lasserre, PhD, Referee, graduation 10/21/2005, Pierre and Marie Curie University, Paris, France.
- Antoine Rousseau, PhD, examiner, graduation 06/14/2005, University of Paris XI, Orsay, France.
- José Carlos Fernandes Pereira, PhD, examiner, graduation 05/17/2005, Institut National Polytechnique de Grenoble, France.
- David Rodriguez Gomez, PhD, examiner, graduation 09/12/2002, University of Sevilla, Spain.
- Macarena Gomez Marmol, PhD, examiner, graduation 06/03/1998, University of Sevilla, Spain.

8 Awards, contracts and premiums

- Grant "Defis émergents", scientific board of the University of Rennes 1, amount: 5 000 € in 2019.
- "Trophée Ifremer" of the best PhD thesis, 09/28/2009, PhD student: G. Pichot, Adviser: R. Lewandowski
- Contract Consortium "[Hydropêche](#)", 10/01/2009-09/31/2011, amount: 122 000 €.
- Grant "Defis émergents", scientific board of the University of Rennes 1, amount: 10 000 € in 2010, 5000 € in 2011.
- ANR Grant, project FF2A3, 01/01/2008-12/31/2010, amount: 104 000 €.
- IFREMER industrial contracts, 01/01/2002-12/31/2003, amount: 25 000 €.
- "Prime d'Encadrement Doctoral et de Recherche" (PEDR, Premium for doctoral supervision and research) non stop over the period 1994-2010, from 2019 to present.

9 List of Publications

NB. With rare exceptions, authors in *Mathematical Publications* are generally quoted in alphabetical order

Research books

1. Tomas Chácon-Rebollo, **Roger Lewandowski**. *Mathematical and numerical foundations of turbulence models and applications*, Birkhäuser's Modeling and Simulation in Science, Engineering and Technology series, Springer, New-York, 2014.
2. **Roger Lewandowski**. *Analyse Mathématique et Océanographie*, collection RMA, Masson, Paris, 1997. [Book on Hal](#)

Preprints

1. L. Berselli, F. Legeais and **Roger Lewandowski**, “Surface boundary layers through a scalar equation with an eddy viscosity vanishing at the ground”, [Paper on HAL](#)

Papers in International journals with Peer Review

1. L.C. Berselli, A. Kaltenbach **Roger Lewandowski**, and M. Růžička, “On the existence of weak solutions for a family of unsteady rotational Smagorinsky models”. Received for publication in *Pure Appl. Funct. Anal.* 2023, [Article on Arxiv](#)
2. F. Legeais and **Roger Lewandowski**, “Continuous boundary condition at the interface for two coupled fluids”, *Applied Maths Letters*, 135, Paper No. 108393, 2023, [Paper on HAL](#)
3. Benoît Pinier, **Roger Lewandowski**, Etienne Mémin and Pranav Chandramouli. “Testing a one-closure equation turbulence model in neutral boundary layers”, *Computer Methods in Applied Mechanics and Engineering*. 376 (2021) 113662. [Article on HAL](#), [Journal](#)
4. L. Berselli, **Roger Lewandowski** and D.-D. Nguyen. “Rotational forms of Large Eddy Simulation turbulence models: modeling and mathematical theory”, *Chinese Annals of Maths, serie B*, 42(1), 1-24, 2021. [Article on HAL](#), [Journal](#)
5. L. Berselli, A. Dunca, **Roger Lewandowski** et D.-D. Nguyen, “Modeling Error of the α -Models of Turbulence in Two dimensions in the Periodic Case”, On line in *Discrete and Continuous Dynamical Systems Series B*, Vol. 26, no. 9, 4613-4643, 2021, [Article on HAL](#), [Journal](#)
6. **Roger Lewandowski**. “On a one dimensional turbulent boundary layer model”, *Pure Appl. Funct. Anal.* 5 (2020), no. 5, 1115–1129, [Article on HAL](#), [Journal](#).
7. C. Amrouche, L. Berselli, **Roger Lewandowski** and D.-D. Nguyen. “Turbulent flows as generalized Kelvin-Voigt materials: modeling and analysis”, *Journal of Non-linear Analysis TMA*, Vol 196, 111790, 2020. [Article on Arxiv](#), [Journal](#)
8. L. Berselli, T. Iliescu, B. Koc and **Roger Lewandowski**. “Long-Time Reynolds Averaging of Reduced Order Models for Fluid Flows: Preliminary Results”, *Mathematics in Engineering*, Vol 2, No 1, 1-25, 2020. [Article on HAL](#), [Journal](#)

9. L. Berselli, **Roger Lewandowski**. “On the Reynolds time-averaged equations and the long-time behavior of Leray-Hopf weak solutions, with applications to ensemble averages”, *Nonlinearity*, Vol 32, No 11, 4579-4608, 2019. [Article sur HAL](#), [Journal](#)
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