

Curriculum vitae

Roger LEWANDOWSKI

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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

- *2009-present*: 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*: Habilitation to Manage Researches in Applied Mathematics, 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*: Masters in Applied Mathematics (Mention Très Bien), Pierre and Marie Curie University (Paris VI), France.

Visiting positions

- *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, Israël, 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 Honk-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.

Delegations and sabbatical terms

- *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.

Professional Services

Congress, Conferences and Seminars Organization

1. Member of the steering committee of WCCM/ECCOMAS 2020
2. 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).
3. 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).
4. Organizer of the "International Congress in Mathematical Fluid Dynamics 2010" (MFD2010), June 21-24 2010, Rennes (France).
5. Organizer of the Colloquium of the Mathematics Department of the University of Rennes 1, September 2006 - June 2008.
6. Co-organizer of the mechanics seminar of the Mathematics Department of the University of Rennes 1, September 2000 - present.
7. Co-organizer of the congress in Honor of 60 birthday of Francois Murat, October 4-5 2007.
8. Co-organizer of the symposium "Theoretical Analysis and Numerical Models for Water Flows in Thin Domains", Eccomas 2004, Jyväskylä (Finland).
9. 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, from 2018
- President of the Jury of the GAMNI's thesis price, from 2018
- 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.

Invited Speaker in Conferences, seminar and colloquiums

International Conferences and Congress

- Time Filters and Predictive Accuracy, May 29-30, 2019, Pittsburgh, USA. Plenary speaker.
- Kolmogorov Days in Évry 2018, September 26-28, 2018, Évry, France. Plenary speaker.
- AMS meeting, Denver, Colorado, USA, October 8-9, 2016. Invited speaker in the session "Above and Beyond Fluid Flow Studies".
- Chaos 2015, Paris, France, May 26–29, 2015. Plenary speaker.
- Workshop on Numerical Approximation of PDEs, Málaga, Spain, April 20–22, 2015. Plenary speaker.
- International Conference on Nonlinear and Multiscale Partial, Differential Equations: Theory, Numerics and Applications, Fudan University, Shanghai, China, September 16–20, 2013. Plenary speaker.
- 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.
- 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.
- 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
- Algerian-French Conference on Non Linear Partial Differential Equations, Tipaza, Algeria. May 23-26 2005. Plenary speaker.
- European Congress on Computational Methods in Applied Sciences and Engineering, Barcelona, Spain. September 11-14 2000, symposium speaker : Oceanography and Climate.

- 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.
- 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 Honk-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), Conference 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).

University service

- *January 2018-present:* Leader of the group GAMNI-SMAI.
- *January 2018-present:* Member of the IRMAR scientific committee.
- *September 2017-present:* local correspondent in Rennes of the SMAI (Société de Mathématiques Appliquées et Industrielles).
- *June 2017-present:* Member of the maths department council of Rennes 1 University.
- *June 2013-present:* Head of the IRMAR Mathematical Modeling team, University of Rennes 1.
- *June 2013-present:* Member of scientific board of the “UFR de mathématiques de l’Université Rennes 1”.
- *March 2012-present:* 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.

Academic Advisement

Postdoctoral Associates Supervised:

- Cedric Ody, 2008-2010

Graduate Students Supervised:

PhD students

- Ali Mohamed Houmed, “Theoretical and numerical aspects of the coupling of the ocean to the atmosphere”, *Beginning of the thesis : March 2019.*

- Dinh-Duong Nguyen, “Regular and non regular solutions of the Navier-Stokes equations in the whole space with an eddy viscosity”, *Beginning of the thesis : October 2017*.
- Benoît Pinier, “Application of the theory of similarities in turbulence to the ocean-atmosphere interface”, *graduation : February 2019*. Current position: research engineer, OSUR, Rennes, France
- Hani ALI, “Mathematical study of some turbulence models graduation”, *graduation December 2011*. Current position: natural risks modeller, Axa Insurance, Paris, France.
- Anne-Claire BENNIS, “Turbulence models for the oceanic boundary layer”, *graduation November 2008*. Current position: associate professor, University of Caen, France.
- Géraldine PICHOT, “Modelization and numerical analysis of coupling hydrodynamic net-flow in a cod end net”, *graduation December 2007*. Current position: tenure researcher INRIA Rennes.
- Julien LEDERER, “Sustainability, climatic risks and analysis of RANS equations”, *graduation January 2006*. Current position: financial analyst, Insight Investment, London, United Kingdom.
- Ronan GUENANFF, “Non stationary coupling Navier-Stokes/Euler for the generation and radiations of aerodynamic noises”, *graduation December 2004*. Current position: mathematic teacher in college.

Master students

1. 2016/2017, Ludovic Godard Cadillac, (Student at Ecole de Ponts et Chaussées), *Pierre and Marie Curie University, Paris*.
2. 2015/2016, Clément Bonvoisin, (Student at ENS Cachan), *Pierre and Marie Curie University, Paris*.
3. 2012/2013, Gautier DELANNOY, (Student at ENS Cachan-Bruz), *University of Rennes 1*.
4. 2008/2009, Hani ALI, *Pierre and Marie Curie University, Paris*.
5. 2006/2007, Laurent HATT (Student Ecole Nationale des Ponts et Chaussés), *Pierre and Marie Curie University, Paris*.
6. 2005/2006, Gilles CANALES (Student ENS Cachan-Bruz), *University of Rennes 1*.
7. 2003/2004, Yves PREAUX, *University of Rennes 1*.
8. 2003/2004, Géraldine PICHOT, *University of Rennes 1*.
9. 2001/2002, Emmanuel GAILLARD, *University of Rennes 1*.
10. 2000/2001, Saddick KADIRI, *University of Rennes 1*.
11. 2000/2001, Stéphanie RUELLAN, *University of Rennes 1*.

12. 1994/1995, Cecile HONORE (student ENS ULM), *Pierre and Marie Curie University, Paris.*
13. 1993/1994, Pamela LANCIANI, *Pierre and Marie Curie University, Paris.*
14. 1992/1993, Sabah BENFIGUIG, *Pierre and Marie Curie University, Paris.*
15. 1990/1991, Richard CROUAU, *Pierre and Marie Curie University, Paris.*
16. 1989/1990, Ana Carpio RODRIGUEZ, *Pierre and Marie Curie University, Paris.*

PhD and Researches Habilitation (HDR) Referrees and Committees:

- 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.

Awards, contracts and premiums

- "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.

Teaching Experience

Teaching Services

- In charge of the teaching unit "Outils Mathématiques 3", second year, Physics, chemistry, engineering, earth science, Bachelor degree, University of Rennes 1, Sept 2014-present
- 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. 2000-June 2004.
- 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 (Homogenization).

Courses

Master degree

- 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

- 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 Mathematics for Social Sciences (MASS), University of Paris X.
- 1991-1999: Mathematics for economy, Bachelor Economic sciences, University of Paris X.
- 1987-1990: Differential equations and Partial differential equations for geophysicists, Pierre and Marie Curie University.

List of Publications

NB. Authors in Mathematical Publications are always 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 (517 pages).
2. **Roger Lewandowski**. *Analyse Mathématique et Océanographie*, collection RMA, Masson, Paris, 1997 (297 pages).

Chapters in Research books

1. **Roger Lewandowski**, B. Pinier. "The Kolmogorov Law of turbulence : what can rigorously be proved ? Part II." *The foundations of Chaos revisited: From Poincaré to recent advancements*, Springer, 2016.
2. **Roger Lewandowski**. "The Kolmogorov-Taylor Law of turbulence : what can rigorously be proved ?" *Handbook of applications of chaos theory*, Taylor and Francis, 2016.

Papers in International journals with Peer Review

1. **Roger Lewandowski**, Benoît Pinier, Etienne Mémin and Pranav Chandramouli. "Testing a one-closure equation turbulence model in neutral boundary layers", To be resubmitted 2019. <https://hal.archives-ouvertes.fr/hal-01875464v1>
2. **Roger Lewandowski**. "On a one dimensional turbulent boundary layer model", Submitted in PAFA on Analysis and PDE, 2019 <https://hal.archives-ouvertes.fr/hal-02134034>

3. L. Berselli, T. Iliescu, B. Koc and **Roger Lewandowski**. “Long-Time Reynolds Averaging of Reduced Order Models for Fluid Flows: Preliminary Results”, Submitted in Mathematics in Engineering, 2019. <https://arxiv.org/abs/1901.04903>
4. 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”, 2019, under revision in Nonlinearity. <https://hal.archives-ouvertes.fr/hal-01695374v1>
5. **Roger Lewandowski**. “Navier-Stokes equations in the whole space with an eddy viscosity”, Received for publication in Journal of Mathematical Analysis and Applications, 2019. <https://hal.archives-ouvertes.fr/hal-01531260v1>
6. B. Pinier, E. Mémin, S. Laizet and **Roger Lewandowski**. “A stochastic flow model to predict the mean velocity in wall bounded flows ”, Received for publication in Physica Review E, 2019. <https://hal.archives-ouvertes.fr/hal-01947662v2>
7. L. Berselli, **Roger Lewandowski**. “On the Bardina’s model in the whole space”, Journal of Mathematical Fluid Mechanics, Vol 20, no 3, pp. 1335-1351, 2018.
8. **Roger Lewandowski**. “Long time turbulence model deduced from the Navier-Stokes Equations”, *Chinese Annals of Mathematics, Serie B, Vol 36, No. 5, pp. 883-894, 2015.*
9. A Dunca, **Roger Lewandowski**. “Error estimates in Approximate Deconvolution Models” *Comm. Math. Sc., Vol 12, No 4, pp. 757-778, 2014.*
10. T. Chacon, **Roger Lewandowski**. “A Variational Finite Element Model for Large-Eddy Simulations of Turbulent Flows”, *Chinese Annals of Mathematics Ser. B, Vol 34, No 5, 667-682, 2013.*
11. L. Berselli, D. Catania, **Roger Lewandowski**. “Convergence of approximate deconvolution models to the mean Magnetohydrodynamics Equations: Analysis of two models”, *Journal of Mathematical Analysis and Applications, Vol. 401, 864-880, 2013.*
12. L. Berselli, **Roger Lewandowski**. “Convergence of approximate deconvolution models to the mean Navier-Stokes Equations”, *Annales de l’Institut Henri Poincaré (C), Non Linear Analysis, Vol 29, 171-198, 2012.*
13. M. Bulíček, **Roger Lewandowski**, J. Målek. ”On evolutionary Navier-Stokes-Fourier type system in three spatial dimensions”, *Commentationes Mathematicae Universitatis Carolinae, N° 52, Vol 1, 89-114, 2011.*
14. A. -C. Bennis, T. Chacon, M. Gomez, **Roger Lewandowski**. ”Numerical modeling of algebraic closure models of oceanic turbulent mixing layers”, *Mathematical Modelling and Numerical Analysis, Vol 44, 1255-1277, 2010.*
15. **Roger Lewandowski**, ”On a Continuous Deconvolution Equation for Turbulence Models”, *Lecture Notes of Neças Center for Mathematical Modeling, Vol 5, 69-102, 2009*
16. C. Bernardi, T. Chacon-Rebello F. Hecht, **Roger Lewandowski**, ”Automatic insertion of a turbulence model in the finite element discretization of the Navier-Stokes equations”, *Math. Mod. and Meth. in App. Sc., No 7, 1-45, 2009.*

17. **Roger Lewandowski**, Y. Préaux. "Attractors for a deconvolution model of turbulence", *Applied Math Letters*, No 22, 642-645, 2009.
18. A. -C. Bennis, T. Chacon, M. Gomez, **Roger Lewandowski**. "Numerical modeling of buoyant turbulent mixing layer", *Bol. Soc. Esp. Math. Appl. No 42*, 127-135, 2008.
19. W. Layton, **Roger Lewandowski**. "A high accuracy Leray-deconvolution model of turbulence and its limiting behavior", *Analysis and Applications*, Vol 6, No 1, pp 23-49, 2008.
20. A. -C. Bennis, T. Chacon, M. Gomez, **Roger Lewandowski**. "Stability of some turbulent vertical models for the ocean mixing boundary layer", *Applied Math Letters*, Vol 21, pp 128-133, 2008.
21. **Roger Lewandowski**, G. Pichot. "Numerical simulation of water flow around a rigid fishing net", *Computer Methods in Applied Mechanics and Engineering*, Vol 196, nb 45-48, pp 4737-4754, 2007.
22. J. Lederer, **Roger Lewandowski**. "On the RANS 3D model with unbounded eddy viscosities", *Ann. IHP Non lin.*, No 24, pp. 413-441, 2007.
23. W. Layton, **Roger Lewandowski**. "Residual stress of approximate deconvolution models of turbulence," *Journal of Turbulence*, Vol 7, No 46, pp 1-21, 2006.
24. **Roger Lewandowski**. "Vorticities in a LES model for 3D periodic turbulent flows", *Journ. Math. Fluid. Mech.*, Vol 8, pp 398-422, 2006.
25. W. Layton, **Roger Lewandowski**. "On a well posed turbulence model", *Discrete and Continuous Dynamical Systems Series B*, Vol 6, nb 1, pp 111-128, 2006.
26. H. Le Dret, **Roger Lewandowski**, D. Priour, F. Chagneau "Numerical Simulation of a Cod End Net. Part 1: Equilibrium in a Uniform Flow", *Journal of Elasticity*, Vol. 76, pp. 139-162, 2004.
27. C. Bernardi, T. Chacon-Rebello M. Gomez, **Roger Lewandowski**, F. Murat. "A model for two coupled turbulent fluids, Part III: Numerical approximation by finite elements", *Numer. Maths.*, Vol. 98, no 1, pp. 33-66, 2004
28. W. Layton, **Roger Lewandowski**. "A simple and stable scale similarity model for large eddy simulation: energy balance and existence of weak solutions", *Applied Maths. Letters*, Vol 16, pp 1205-1209, 2003.
29. C. Bernardi, T. Chacon-Rebello M. Gomez, **Roger Lewandowski**, F. Murat. "A model for two coupled turbulent fluids, Part II: Numerical approximation by spectral discretization", *Siam Journ. Num. An.*, Vol 40, No 6, pp. 2368-2394, 2003.
30. T. Gallouët, J. Lederer, **Roger Lewandowski**, F. Murat, L. Tartar. "On a turbulent system with unbounded eddy viscosities", *Nonlinear Analysis TMA*, 52, pp. 1051-1068, 2003.
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