

Senior Lecturer at University of Geneva, Section of Mathematics

Address: UNIGE, 7-9 rue du Conseil-Général, CP64, 1211 Geneva 4, Switzerland

Phone: +41 22 379 11 61

Email: Gilles.Vilmart@unige.ch Homepage: www.unige.ch/~vilmart

PERSONAL INFORMATIONS

Date of birth: July 29th, 1982. Swiss and French, married, three children. [Google Scholar id](#).

EDUCATION/QUALIFICATION

- 2014 Professor of Applied Mathematics's qualification (CNU 26), France.
- 2013 Habilitation in Mathematics (HDR), ENS Rennes Cachan Bretagne.
- 2008 Ph.D. in Mathematics under the supervision of Philippe Chartier and Ernst Hairer. Double doctorate program ("cotutelle"): Univ. Geneva and Univ. Rennes 1.
- 2002–2006 Élève normalien (civil servant student) at Ecole Normale Supérieure de Rennes.
- 2005 Master in Mathematics, Univ. Rennes 1 and Agrégation de mathématiques, France.

EMPLOYMENT

- 01/2025– Maître d'enseignement et de recherche, Senior Lecturer (100%): permanent research and lecturing position at the University of Geneva, Section of Mathematics.
- 01/2018–12/2024 Maître d'enseignement et de recherche (40%) & Collaborateur scientifique II (60%): permanent research and lecturing position at Univ. Geneva, Section of Mathematics.
- 09/2014–12/2017 Collaborateur scientifique II (100%): permanent research and lecturing position at the University of Geneva, Section of Mathematics.
- 09/2013–08/2014 Maître d'enseignement et de recherche suppléant (100%), University of Geneva, Section of Mathematics. On leave from ENS Rennes and INRIA.
- 09/2011–08/2013 École Normale Supérieure de Rennes, dép. de mathématiques: "Agrégé-préparateur". Member of the INRIA research team IPSO. (Functions: research and lecturing).
- 09/2009–08/2011 EPF Lausanne, Post-doc in the group of Assyr Abdulle.
- 09/2006–08/2009 University of Geneva, section of Mathematics: Assistant.

RESEARCH GRANTS

- 2023-2027 SNSF grant as principal investigator, research project including three PhD students (ongoing) and one post-doc. Title: "Geometric and multiscale methods for differential equations" (778'000 CHF).
- 2021-2025 SNSF group grant "Analyse numérique" as principal investigator (with M. Gander, (ongoing) E. Hairer, B. Vandereycken, 163'000 CHF).
- 2020-2024 Strategic partnership grant as principal investigator with Georg Gottwald, University of Sydney (University of Geneva international office, 26'000 CHF).
- 2019-2023 SNSF grant as PI, research project including three PhD students (640'000 CHF).
- 2018-2020 SNSF group grant "Analyse numérique" (the PI was M. Gander, with E. Hairer, B. Vandereycken, 112'000 CHF).
- 2016-2019 SNSF grant as PI, research project including two PhD students (368'000 CHF).

RESEARCH GROUP SUPERVISION

- Current PhD students at UNIGE: Nicolas Masson (since Sep. 2020), Eugen Bronasco (since Feb. 2021, jointly with Dominic Manchon, CNRS, Clermont-Ferrand), Ramona Häberli (since Sep. 2021), Mathieu Benninghoff (from Jan. 2025).
- Current post-doc at UNIGE: Mahdieh Arezoomandan (since Sep. 2024).

- Defended PhD theses at UNIGE: Ibrahim Almuslimani (2020, now post-doc EPFL), Guillaume Bertoli (2021, now post-doc Columbia Univ.), Adrien Laurent (2021, now permanent researcher at INRIA Rennes, [Prix Henri Fehr 2021](#) for the best PhD thesis of the year of the Section of mathematics), and Laurent is one of three winners of the [SWICCOMAS Prize 2022](#)).

PUBLICATIONS (all preprints are available at unige.ch/~vilmart/publications)

See attached list of publications: 41 articles published or accepted in international research journals.

TEACHING ACTIVITIES

- Each year since 2013 at UNIGE: one annual basic course and one semestrial advance course (including “geometric and stiff methods for differential equations”, “numerical methods for stochastic differential equations”, “numerical analysis and functional analysis for PDEs”).
- Since 2019, reform coordinator and member of the committee for the Bachelor/Master of Science in Mathematics, Computer Science, and Numerical Sciences.

SELECTED PLENARY TALKS (see also the list of talk contributions at unige.ch/~vilmart/talks)

- SciCADE 2024, International Conference on SCientific Computation And Differential Equations, Singapore, Jul. 2024.
- NUMDIFF-16, Conference on the numerical solution of differential and differential-algebraic equations, Martin Luther University Halle-Wittenberg, Sept. 2021.

MEMBERSHIPS IN PANELS, BOARDS, ETC., AND INDIVIDUAL SCIENTIFIC REVIEWING ACTIVITIES

- Scientific committee member for the “New talent prize” at SciCADE 2024, Singapore, Jul. 2024.
- Reviewer for PhD defenses: S. Di Giovacchino (Univ.L’Aquila, 2022), M.-A. N’Guessan (Ecole Polytechnique, 2020), T. Vaillant (Observatoire de Paris, 2018), A.-A. Homman (ENPC, 2016), B. Pawilowski (Univ. Rennes 1, 2015), J. MacLean (Univ. Sydney, 2015).
- Since 2019, member of the editorial board of AIMS Applied Mathematics books.
- Memberships: [SIAM](#) (Society for industrial and applied mathematics, USA), [SMAI](#) (Society for industrial and applied mathematics, France), [SMS](#) (Swiss mathematical society, Switzerland), [EMS](#) (European Mathematical Society), [Swiccomas](#) (Swiss Community for Computational Methods in Applied Sciences, Switzerland), [CAMAS Consulting platform in Applied Mathematics and Statistics](#) (Co-funder member, Univ. Geneva).
- Anonymous refereeing for international journals (approximately 20 papers per year), and for public research foundations (NSF USA, ANR France, RGC Hong-Kong, NSC Poland, NKFIH Hungary).

RECENT ORGANIZATION OF WORKSHOPS, MEETINGS

- | | |
|------------|---|
| Since 2015 | Organizer (with M.J. Gander and B. Vandereycken) of the weekly numerical analysis seminar, Section of Mathematics, University of Geneva. unige.ch/math/anum |
| 2024 | Organizer (with B. Leimkuhler, R. Tsai, R. Ward) of the Workshop on Constrained Dynamics, Stochastic Numerical Methods and the Modeling of Complex Systems , Oberwolfach, May 2024.
Organizer (together with M.J. Gander and B. Vandereycken) of the Swiss Numerical Analysis Day 2024 , Univ. Geneva, Sep. 2024.
Organizer (with G. Gottwald) of the Workshop on Numerical methods for complex high-dimensional systems , Jervis Bay, NSW, Australia, Jul. 2024. |
| 2020 | Organizer (with G. Gottwald) of the Workshop on Multiscale methods for deterministic and stochastic dynamics , Univ. Geneva, Jan.29-30, 2020. |
| 2019 | Contributed minisymposium organizer on Numerical methods for stochastic (partial) differential equations at SciCADE 19 , University of Innsbruck, 22-26 Jul.2019. |

AWARD

- | | |
|------|---|
| 2013 | Young Researcher First Prize 2013 of the Region Bretagne, France (awarded every 2 years to researchers who received a PhD in Brittany in the last 5 years). |
|------|---|