

Virginie Ehrlacher (Galland)

Birth date : 18th August 1986

Nationality : French

Family status : Married, two children.

Professional address :

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Education and position

— **2004 - 2007 :**

- Ecole Polytechnique, Palaiseau, France. Specialization in Fluid Mechanics and Applied Mathematics.

— **2007-2009 :**

- Ecole des Ponts Paristech, Marne-la-Vallée, France. Department : Mathematical and informatical engineering.
- Master Mathematics and Applications of the Jussieu University, Paris, France. Option : Numerical analysis and partial differential equations.

— **2009-2012 :**

- PhD in Applied Mathematics at the CERMICS, Ecole des Ponts Paristech, Marne-la-Vallée, France. *Subject* : Some mathematical models in quantum chemistry and uncertainty quantification. *Advisors* : Eric Cancès and Tony Lelièvre.

— **2012-2013 :** Post-doctoral fellow at the Institute of Pure and Applied Mathematics, Los Angeles, USA, and at the Cluster of Excellence Engineering of Advanced Materials, Friedrich-Alexander University of Erlangen-Nürnberg, Erlangen, Germany.

— **Since 2013 :** Researcher at the CERMICS, Ecole des Ponts Paristech, Marne-la-Vallée, France, and in the INRIA MATERIALS team-project.

— **Since 2007 :**

- Engineer of the Corps des Ponts et Chaussées.

Publications

- Amina Benaceur, Alexandre Ern, Virginie Ehrlacher, A reduced basis method for parametrized variational inequalities applied to contact mechanics, accepted in International Journal for Numerical Methods in Engineering, 2019.
- Judith Berendsen, Martin Burger, Virginie Ehrlacher, Jan-Frederik Pietschmann, Uniqueness of strong solutions and weak-strong stability in a system of cross-diffusion equations, accepted in Journal of Evolution Equations, 2019.
- Athmane Bakhta, Virginie Ehrlacher, David Gontier, Numerical reconstruction of the first band(s) in an inverse Hill's problem, to appear in ESAIM : COCV, 2019.
- Thomas Boiveau, Virginie Ehrlacher, Alexandre Ern, Anthony Nouy, Low-rank approximation of linear parabolic equations by space-time tensor Galerkin methods, ESAIM : M2AN, 53(2), 2019, p. 635-658.
- Amina Benaceur, Virginie Ehrlacher, Alexandre Ern, Sébastien Meunier, A progressive reduced basis/empirical interpolation method for nonlinear parabolic problems, SIAM J. Sci. Comput., 40(5), A2930-A2955 (2018).

- Athmane Bakhta, Virginie Ehrlicher, Cross-diffusion systems with non-zero flux and moving boundary conditions, ESAIM :M2AN, 52(4), 2018, p.1385-1415.
- Virginie Ehrlicher and Damiano Lombardi, A dynamical adaptive tensor method for the resolution of the Vlasov-Poisson system, Journal of Computational Physics, 339, 2017, pp 285-306.
- Virginie Ehrlicher, Christoph Ortner and Alexander V. Shapeev, Analysis of Boundary Conditions for Crystal Defect Atomistic Simulations, ARMA, 222(3), 2016, pp 1217-1268.
- Eric Cancès, Virginie Ehrlicher, Frédéric Legoll and Benjamin Stamm, An embedded corrector problem to approximate the homogenized coefficients of an elliptic equation, Comptes-Rendus Mathématiques, 353(9), 2015, pp 801-806.
- Eric Cancès, Virginie Ehrlicher and Tony Lelièvre, Greedy algorithms for high-dimensional eigenvalue problems, Constructive Approximation, 40, 2014, pp 387-423.
- Eric Cancès, Virginie Ehrlicher and Yvon Maday, Non-consistent approximations of self-adjoint eigenproblems : Application to the supercell method, Numerische Mathematik, 128, 2014, pp 663-706.
- Eric Cancès, Virginie Ehrlicher and Yvon Maday, Periodic Schrödinger Operators with Local Defects and Spectral Pollution, SIAM J. Numer. Anal., 50(6), 2012, pp 3016-3035.
- Eric Cancès, Virginie Ehrlicher and Tony Lelièvre, Convergence of a greedy algorithm for high-dimensional convex problems, M3AS, 21(12), 2011, pp 2433-2467.
- Eric Cancès and Virginie Ehrlicher, Local defects are always neutral in the Thomas-Fermi-von Weizsäcker theory of crystals, Arch. Rational Mech. Anal., 202, 2011, pp 933-973.
- Geoffroy Hautier, Chris Fischer, Virginie Ehrlicher, Anubhav Jain and Gerbrand Ceder, Data Mined Ionic Substitutions for the Discovery of New Compounds, Inorganic Chemistry, 50 (2), 2011, pp 656-663.

Languages

French : Mother tongue.

English : fluent.

German : good level (ZMP 2007).

Chinese : basic knowledge (2 years study).

Programming Languages : Abinit, C++, Java, Scilab, Matlab, FreeFem++, Maple, Catia, OpenFOAM.