Guillaume LEGENDRE

Born january 23, 1976 in Paris
French citizenship
Two children

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Professional Experience

- **Assistant professor** at the CEREMADE (since september 2007).

- **Postdoctoral fellow** at the CEREMADE, UMR CNRS 7534, in the ANR project ACCQUAREL (december 2006 to august 2007).

- **Postdoctoral fellow** (proyecto Fondecyt nᵒ3060018) at the Centro de Modelamiento Matemático, UMI 2807 Universidad de Chile-CNRS, Santiago, Chile, (october 2005 to september 2006).

- **Attaché temporaire d'enseignement et de recherche** at the université Paris-Dauphine (september 2004 to august 2005).

- **Attaché temporaire d'enseignement et de recherche** at the université de Versailles Saint-Quentin-en-Yvelines (september 2003 to august 2004).

- **Teacher assistant** at the université d'Évry-Val d'Essonne in 2001 and 2002.

- **Ph.D. student** at the Office National d'Études et de Recherche Aérospatiales (november 1999 to october 2002).

Higher Education

1999 **Predoctorate studies (DEA) in Mechanics**, specialized in fluid mechanics, at the Paris VI university, with upper second class honours.

1998 **Predoctorate studies (DEA) in numerical analysis** at the Paris VI university, with lower second class honours.

1997 **M.Sc. (maîtrise) in applied mathematics** at the Paris VI university, with lower second class honours.

1996 **B.Sc. (licence) in applied mathematics** at the Paris VI university, with lower second class honours.

1995 **Scientific DEUG A** (specialized in mathematics and physics) at the Paris VI university, with lower second class honours.

Skills

- **Computing:** scientific programming: Fortran 77/95, C, Matlab/GNU Octave, Python
  miscellaneous: LaTeX, HTML.

- **Languages:** french (mother tongue), english (fluent), spanish (fluent), portuguese (beginner).

- **Other:** referee for SIAM Journal on Scientific Computing, Mathematical Modelling and Numerical Analysis (M2AN), Mathematical Method in Applied Sciences, Annals of the Alexandru Ioan Cuza University - Mathematics, Journal of Computational Physics.

Papers

1. *Second-order in time schemes for gradient flows in Wasserstein and geodesic metric spaces*, G. Legendre and G. Turinici, C. R. Acad. Sci. Paris Sér. I Math., 355(3), p. 345-353, (2017).

2. *Concentration phenomenon in some non-local equation*, O. Bonnefon, J. Coville and G. Legendre, Discrete Contin. Dynam. Systems B, 22(3), p. 263-281, (2017).

3. *On the use of perfectly matched layers in the presence of long or backward propagating guided elastic waves*, A.-S. Bonnet-Ben Dhia, C. Chambeyron and G. Legendre, Wave Motion, 51(2), p. 266-283, (2014).

4. *An alternative to Dirichlet-to-Neumann maps for waveguides*, A.-S. Bonnet-Ben Dhia and G. Legendre, C. R. Acad. Sci. Paris Sér. I Math., 349(17-18), p. 1005-1009, (2011).

5. *Convergence of a Lagrange–Galerkin method for a fluid–rigid body system in ALE formulation*, G. Legendre and T. Takahashi, ESAIM Math. Model. Numer. Anal., 42(4), p. 609-644, (2008).

6. *Time–harmonic acoustic propagation in the presence of a shear flow*, A.-S. Bonnet-Ben Dhia, È.-M. Duclairoir, G. Legendre and J.-F. Mercier, J. Comput. Appl. Math., 204(2), p. 428-439, (2007).

7. *Well–posedness of the Drude–Born–Fedorov model for chiral media*, P. Ciarlet, Jr. and G. Legendre, Math. Models Methods Appl. Sci., 17(3), p. 461-484, (2007).

8. *Perfectly matched layers for time–harmonic acoustics in the presence of a uniform flow*, E. Bécache, A.-S. Bonnet-Ben Dhia and G. Legendre, SIAM J. Numer. Anal., 44(3), p. 1191-1217, (2006).

9. *Perfectly matched layers for the convected Helmholtz equation*, E. Bécache, A.-S. Bonnet-Ben Dhia and G. Legendre, SIAM J. Numer. Anal., 42(1), p. 409-433, (2004).

10. *Analyse mathématique de l'équation de Galbrun en écoulement uniforme*, A.-S. Bonnet-Ben Dhia, G. Legendre et E. Lunéville, C. R. Acad. Sci. Paris Sér. IIb Méc., 329(8), p. 601-606, (2001).

Preprints

- *Evolution of anisotropic diffusion in two-dimensional heterogeneous environments*, E. Bouin, G. Legendre, Y. Lou and N. Slover, hal-02489905, 2020.

- *On the method of reflections*, P. Laurent, G. Legendre and J. Salomon, hal-01439871, 2017.

- *Time-domain study of the Drude-Born-Fedorov model for a class of heterogeneous chiral material*, P. Ciarlet, G. Legendre and S. Nicaise, hal-00430196, 2009.

Seminars

2013 POEMS seminar at ENSTA, june 27.

2011 Mathematical engineering seminar at the CNAM, october 17.

2008 "Applications des mathématiques" workgroup at the École Normale Supérieure de Cachan – Antenne de Bretagne (Bruz, France), january 16.

2006 Minisymposium at MAFELAP 2006 - The mathematics of finite elements and applications (Brunel, UK), june 13–16.

2005 ANCIF'05 - International workshop on numerical analysis and control of fluid-structure interactions (Termas de Chillán, Chile), december 5–9.

Seminar at the Departamento de Ingeniería Matemática of the universidad de Concepción (Concepción, Chile), november 9.

Seminar "Mecánica Matemática" at the Centro de Modelamiento Matemático of the universidad de Chile (Santiago, Chile), october 28.

Seventh international conference on mathematical and numerical aspects of waves (Providence, USA), june 20–24.

Numerical workgroup at the laboratoire de mathématiques of the université Paris-Sud XI (Orsay, France), april 13.

Seminar at the Institut Élie Cartan de Nancy (Nancy, France), april 12.

2004 Seminar at the laboratoire de mathématiques appliquées of the université de technologie de Compiègne (Compiègne, France), november 16.

Trente-sixième congrès national d'analyse numérique (Obernai, France), may 31–june 4.

"Vectorial finite element" workshop (Paris, France), february 3.

2003 Sixth international conference on mathematical and numerical aspects of wave propagation (Jyväskylä, Finland), june 30–july 4.

2002 Seminar at the Centre Acoustique of the École Centrale de Lyon (Ecully, France), september 5.

Sixième congrès français d'Acoustique (Lille, France), april 8–11.

2001 CRESPO seminar, CNRS-ENSTA-INRIA (INRIA Rocquencourt, France), november 22.

MÉLINA workshop (Le Tronchet, France), june 5–7.

Deuxièmes journées sur l'acoustique de Galbrun (Arcachon, France), april 4–6.