Stef GRAILLAT

Curriculum vitae
September 2014

Employment :
Professor of Computer Science
Université Pierre et Marie Curie (Paris 6) - UPMC
Laboratoire LIP6

Personal details :
Born : April 8th, 1978 in Angers (France)
Nationality : french

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1 University status and academic positions

2014–present Professor of Computer Science at Université Pierre et Marie Curie (Paris 6) - UPMC

2013–2014 On secondment with CNRS in the AriC team at LIP in ENS Lyon

2006–2014 Associate Professor of Computer Science at Université Pierre et Marie Curie (Paris 6) - UPMC

2003–2006 Teaching Assistant at Université de Perpignan

2001–2003 Student at École normale supérieure de Cachan, Brittany campus

1998–2001 Student at Ensimag (a French Grande École in computer science and applied mathematics)

1996–1998 Student at "classes préparatoires MPSI et MP*", Lycée Clemenceau (classes preparing for entrance examinations to the French Grandes Écoles)

2 Diplomas

2013 "Habilitation à diriger des recherches" in Computer Science at Université Pierre et Marie Curie. Jury : Valérie Berthé (president), Jean-Guillaume Dumas, Laura Grigori, Dominique Michelucci (referee), Jean-Michel Muller (referee), Mohab Safey El Din and Lihong Zhi (referee). Title : *contribution to the increase of accuracy and validation of numerical algorithms*

2005 PhD in Computer Science from Université de Perpignan. Jury : M. Daumas, Ph. Langlois (advisor), S.M. Rump (referee), G. Villard (referee), É. Walter, P. Zimmermann. Title : *Fiabilité des algorithmes numériques : pseudosolutions structurées et précision*

2002 Agrégation externe de mathématiques (high-level competitive examination for the recruitment of teachers in mathematics)

2001 Engineer Diploma of Computer Science and Applied Mathematics from Ensimag (equivalent to master's degree)
Master of Applied Mathematics from Université Joseph Fourier (Grenoble 1)

2000 Bachelor of Mathematics from Université Joseph Fourier (Grenoble 1)

1996 Baccalaureat in Science

3 Stays abroad

September 2011 Stay of one month at Waseda University, Tokyo

April-June 2006 Stay of 3 month at the Institute for Reliable Computing of the Hamburg University of Technology

January-March 2006 Stay of 3 month at the Manchester Institute for Mathematical Sciences of The University of Manchester

4 Honors and awards

– Holder of the "Prime d'Investissement Recherche" (PIR) for the period 2009-2013 given by UPMC. It is an excellence scientific award for a period of 4 years.

5 Academic visitors

– Shin'ichi Oishi, Waseda University, one month in 2011
– Siegfried M. Rump, Hamburg University of Technology, one month in 2008, 2009 and 2010

6 Research

I am a member of the PEQUAN (Performance and Quality of Numerical Algorithms) team of the department of Scientific Computing of the Computer Science Laboratory LIP6.

Research Interests

– Computer arithmetic, interval arithmetic
– Numerical quality of scientific software, rounding error analysis
– Numerical linear algebra, numerical analysis
– Computer algebra, symbolic computation, numerical polynomial algebra
– High performance scientific computing

Supervision

– Supervisor with Jean-Claude Bajard and Pierre Fortin of the PhD thesis of Mourad Goui-
   cem (2010-2013).
   Title : *Conception et implantation d'algorithmes efficaces pour la résolution du dilemme
   du fabricant de table*
– Supervisor with Fabienne Jézéquel of the master thesis of Yuxiang Zhu (2010).
   Title : *Conception et implantation d'une arithmétique stochastique multiprécision*
– Supervisor of the master thesis of Jérémy Jean (2010).
   Title : *Développement d'une bibliothèque de grands corps finis en arithmétique flottante*
– Supervisor with Jean-Luc Lamotte of the master thesis of Hong Diep Nguyen (2007).
   Title : *Calcul précis et efficace avec le processeur Cell*

7   Administrative activities

Research projects

List of research projects where I was or where I am involved :

– ANR Blanc (2010-2013) TaMaDi : Table Maker Dilemma (leader : Jean-Michel Muller)
– Project Emergence-UPMC (2010-2012) : Automatic generation of parallel numeric codes
   for data assimilation (leader : Julien Brajard)
– Project "Coup de pouce recherche" Polytech'Paris-UPMC (2010) GPUPS : Computation of
   pseudospectra on GPU (leader : Pierre Fortin)
– 2007-2008 : LIP6 project "Symbolic-Numeric Algorithms for Polynomial Solving"
– Action Concertée Incitative "Jeunes chercheurs 2003-2005" (MENRT) : Numerical quality
   of scientific software and computer arithmetic (leader : Ph. Langlois)
– Action Spécifique 2003-2004 (CNRS) : Embedded numerical validation (leader : Ph. Lan-
   glois and F. Rico)

Teaching responsabilities

– Head of the major "computer science and applied mathematics" of the Bachelor of Com-
   puter Science (2009-2011)
– Director of studies of the 3rd year of the Bachelor of Mathematics and Computer Science
   (about 100 students) during the year 2008-2009

Administrative commitee

– Members of the hiring commitee for the employment of associate professors at University
   of Nantes (2009) and University of Perpignan (2009-2010)

8 Publications and seminars

8.1 Publications

Preprint

[1] Sylvain Collange, David Defour, Stef Graillat, and Roman Iakymchuk. Full-Speed Deterministic Bit-Accurate Parallel Floating-Point Summation on Multi- and Many-Core Architectures. Rapport de recherche hal-00949355, disponible à http://hal.archives-ouvertes.fr/hal-00949355, Février 2014.

[2] Pierre Fortin, Mourad Gouicem, and Stef Graillat. GPU-accelerated generation of correctly-rounded elementary functions. Rapport de recherche hal-00751446, disponible à http://hal.archives-ouvertes.fr/hal-00751446, Février 2014.

[3] Stef Graillat, Christoph Lauter, Peter Tang, Naoya Yamanaka, and Shin'ichi Oishi. Efficient calculations of faithfully rounded l_2-norms of n-vectors. Rapport de recherche, Décembre 2013.

[4] Stef Graillat, Vincent Lefèvre, and Jean-Michel Muller. On the maximum relative error when computing x^n in floating-point arithmetic. Rapport de recherche ensl-00945033, disponible à http://hal-ens-lyon.archives-ouvertes.fr/ensl-00945033, Février 2014.

Thesis

[5] Stef Graillat. *Contribution to the increase of accuracy and validation of numerical algorithms*. Habilitation à diriger des recherches, Université Pierre et Marie Curie (Paris 6), December 2013.

[6] Stef Graillat. *Fiabilité des algorithmes numériques : pseudosolutions structurées et précision*. Thèse de doctorat, Université de Perpignan, Novembre 2005.

Book chapters, chapters for encyclopedia

[7] Jean-Marie Chesneaux, Stef Graillat, and Fabienne Jézéquel. *Encyclopedia of Computer Science and Engineering*, volume 4, chapter Rounding Errors, pages 2480–2494. Wiley, 2009.

Articles in journals

[8] Hao Jiang, Stef Graillat, Canbin Hu, Shengguo Lia, Xiangke Liao, Lizhi Cheng, and Fang Su. Accurate evaluation of the k-th derivative of a polynomial. *J. Comput. Appl. Math.*, 191 :28–47, 2013.

[9] Stef Graillat and Valérie Ménissier-Morain. Accurate summation, dot product and polynomial evaluation in complex floating point arithmetic. *Information and Computation*, (216) :57–71, 2012.

[10] Stef Graillat, Fabienne Jézéquel, Shiyue Wang, and Yuxiang Zhu. Stochastic arithmetic in multiprecision. *Math.comput.sci.*, 5(4) :359–375, 2011.

[11] Siegfried R. Rump and Stef Graillat. Verified error bounds for multiple roots of systems of nonlinear equations. *Numer. Algorithms*, 54(3) :359–377, 2010.

[12] Stef Graillat, Philippe Langlois, and Nicolas Louvet. Algorithms for accurate, validated and fast polynomial evaluation. *Japan J. Indust. Appl. Math.*, 2-3(26) :191–214, 2009. Special issue on State of the Art in Self-Validating Numerical Computations.

[13] Diep Nguyen Hong, Stef Graillat, and Jean-Luc Lamotte. Extended precision with a rounding mode toward zero environment. application on the cell processor. *Int. J. Reliability and Safety*, 3(1/2/3) :153–173, 2009. special issue on "Reliable Engineering Computing".

[14] Stef Graillat. Accurate floating point product and exponentiation. *IEEE Transactions on Computers*, 58(7) :994–1000, 2009.

[15] Stef Graillat. Accurate simple zeros of polynomials in floating point arithmetic. *Comput. Math. Appl.*, 56(4) :1114–1120, 2008.

[16] Stef Graillat. Some topological and geometric properties of pseudozero set. *Appl. Math. E-Notes*, 8 :98–108, 2008.

[17] Stef Graillat. Pseudozero set of real multivariate polynomials. *Math.comput.sci.*, 1(2) :337–352, 2007.

[18] Stef Graillat and Philippe Langlois. Real and complex pseudozero sets for polynomials with applications. *Theor. Inform. Appl.*, 41(1) :45–56, 2007. Special Issue : Real Numbers.

[19] Françoise Tisseur and Stef Graillat. Structured condition numbers and backward errors in scalar product spaces. *Electron. J. Linear Algebra*, 15 :159–177 (electronic), 2006.

[20] Stef Graillat. A note on structured pseudospectra. *J. Comput. Appl. Math.*, 191(1) :68–76, 2006.

[21] Stef Graillat. A note on a nearest polynomial with a given root. *SIGSAM Bull.*, 39(2) :53–60, 2005.

[22] Stef Graillat. Computation of pseudozero abscissa. *An. Univ. Timişoara Ser. Mat.-Inform.*, 42(Special issue) :115–128, 2004.

Articles in reefered conference proceedings

[23] Hao Jiang, Stef Graillat, and Roberto Barrio. Accurate and fast evaluation of elementary symmetric functions. In *Proceedings of the 21st IEEE Symposium on Computer Arithmetic, Austin, TX, USA, April 7-10*, pages 183–190, 2013.

[24] Pierre Fortin, Mourad Gouicem, and Stef Graillat. Towards solving the table maker dilemma on GPU. In *Proceedings of the 20th Euromicro International Conference on Parallel, Distributed, and Network-Based Processing (PDP 2012), Munich, Germany, February 15-17*, pages 407–415, 2012.

[25] Jérémy Jean and Stef Graillat. A parallel algorithm for dot product over word-size finite field using floating-point arithmetic. In *Proceedings of the 12th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Timisoara, Romania, September 23-26*, pages 80–87, 2010.

[26] Stef Graillat, Fabienne Jézéquel, and Yuxiang Zhu. Stochastic arithmetic in multiprecision. In *NSV3, Third International Workshop on Numerical Software Verification, Edinburgh, UK, July 15th,* 7 pages, 2010.

[27] Stef Graillat and Philippe Trébuchet. A new algorithm for computing certified numerical approximations of the roots of a zero-dimensional system. In *Proceedings of the International Symposium on Symbolic and Algebraic Computation, Seoul, Korea, July 28-31*, pages 167–173, 2009.

[28] Stef Graillat, , and Jean-Luc Lamotte et Diep Nguyen Hong. Error-free transformation in rounding mode toward zero. In *Lecture Notes in Computer Science (LNCS), Numerical Validation in Current Hardware Architectures*, volume 5492/2009, pages 217–229, 2009.

[29] Stef Graillat and Valérie Ménissier-Morain. Compensated horner scheme in complex floating point arithmetic. In *Proceedings of the 8th Conference on Real Numbers and Computers, Santiago de Compostela, Spain, July 7-9*, pages 133–146, 2008.

[30] Stef Graillat and Valérie Ménissier-Morain. Error-free transformations in real and complex floating point arithmetic. In *Proceedings of the International Symposium on Nonlinear Theory and its Applications, Vancouver, Canada, September 16-19*, pages 341–344, 2007.

[31] Stef Graillat and Philippe Langlois. Pseudozero set of interval polynomials. In *Proceedings of the 21th ACM Symposium on Applied Computing SAC'2006, Dijon, France*, pages 1655–1659, Avril 2006.

[32] Stef Graillat, Philippe Langlois, and Nicolas Louvet. Improving the compensated Horner scheme with a Fused Multiply and Add. In *Proceedings of the 21th ACM Symposium on Applied Computing SAC'2006, Dijon, France*, pages 1323–1327, Avril 2006.

[33] Stef Graillat. Pseudozero set of multivariate polynomials. In Jan Draisma and Hanspeter Kraft, editors, *Proceedings of 10th Rhine Workshop on Computer Algebra (RWCA), Basel, Switzerland*, pages 131–141, Mars 2006.

[34] Stef Graillat and Philippe Langlois. A comparison of real and complex pseudozero sets for polynomials with real coefficients. In Christiane Frougny, Vasco Brattka, and Norbert Müller, editors, *RNC-6, Real Numbers and Computer Conference, Schloss Dagstuhl, Germany*, pages 103–112, Novembre 2004.

[35] Stef Graillat. Computation of pseudozero abscissa. In Dana Petcu, Viorel Negru, Daniela Zaharie, and Tudor Jebelean, editors, *Proceedings of the 6th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing, Timişoara, Romania*, pages 176–187, Septembre 2004.

[36] Stef Graillat and Philippe Langlois. Pseudozero set decides on polynomial stability. In Bart de Moor, Bart Motmans, Jan Willems, Paul Van Dooren, and Vincent Blondel, editors, *Proceedings of the Symposium on Mathematical Theory of Networks and Systems, Leuven, Belgium*, Juillet 2004. (CD-ROM, papers/537.pdf).

[37] Stef Graillat and Philippe Langlois. Testing polynomial primality with pseudozeros. In Marc Daumas, editor, *RNC-5, Real Numbers and Computer Conference, Lyon, France*, pages 121–137, Septembre 2003.

Articles in conference proceedings

[38] Stef Graillat. Accurate floating point product. In *Proceedings of the Workshop on Reliable Engineering Computing, Savannah, Georgia, USA, February 20-22*, pages 351–361, 2008.

[39] Nguyen Hong Diep, Stef Graillat, and Jean-Luc Lamotte. Precise and effective scientific calculation on the cell processor. In *Proceedings of the Workshop on Reliable Engineering Computing, Savannah, Georgia, USA, February 20-22*, pages 333–350, 2008.

[40] Stef Graillat and Nicolas Louvet. Applications of fast and accurate summation in computational geometry. In *Proceedings of the Second International Worskhop on Reliable Engineering Computing REC'2006, Savannah, Georgia, USA*, Février 2006. 12 pages.

[41] Stef Graillat, Philippe Langlois, and Nicolas Louvet. Accurate and validated polynomial evaluation in floating point arithmetic. In B. Buchberger, S. Oishi, M. Plum, and S.M. Rump, editors, *Algebraic and Numeric Algorithms and Computer-assisted Proofs*, Dagstuhl Seminar 5391, September 2005.

Communications in international conferences (summary)

[42] Pierre Fortin, Mourad Gouicem, and Stef Graillat. Solving the table maker's dilemma by reducing divergence on GPU. In *Proceedings of the 15th GAMM - IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics (SCAN), Novosibirsk, Russia, September 23-29*, pages 45–46, 2012.

[43] Stef Graillat. Faithful roundings of sum with nonnegative entries (**conférencier invité**). In *JSIAM Meeting 2011, Doshisha University, Kyoto, Japan, September 14-16*, pages 349–350, 2011.

[44] Stef Graillat. Verified error bounds for multiple roots of systems of nonlinear equations (**conférencier invité**). In *CRC 2011, International Workshop on Certified and Reliable Computation, Nan Ning, Guang Xi, China, July 17-20*, 2011.

[45] Stef Graillat, Fabienne Jézéquel, and Yuxiang Zhu. SAM : a multiprecision stochastic arithmetic library. In *14th GAMM - IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics (SCAN), Lyon, France, September 27-30*, 2010.

[46] Stef Graillat. Computation of dot products in finite fields with floating-point arithmetic. In *Computer-assisted proofs - tools, methods and applications, Dagstuhl Seminar, Germany, November 15-20, 2009*, 2009.

[47] Stef Graillat. Accurate simple zeros of polynomials. In *13th GAMM - IMACS International Symposium on Scientific Computing, Computer Arithmetic and Verified Numerical Computations SCAN'08, El Paso, Texas, USA, September 29 - October 3*, pages 52–53, 2008.

[48] Stef Graillat, Jean-Luc Lamotte, Siegfried M. Rump, and Svetoslav Markov. Interval arithmetic on the cell processor. In *13th GAMM - IMACS International Symposium on Scientific Computing, Computer Arithmetic and Verified Numerical Computations SCAN'08, El Paso, Texas, USA, September 29 - October 3*, page 54, 2008.

[49] Stef Graillat. Validated pseudozero set of polynomials. In *12th GAMM - IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics, Duisburg, Germany*, pages 160–161, Septembre 2006.

[50] Stef Graillat, Philippe Langlois, and Nicolas Louvet. Choosing a twice more accurate dot product implementation. In *Proceedings of the International Conference of Numerical Analysis and Applied Mathematics, Hotel Belvedere Imperial, Hersonnisos, Crete, Greece*, pages 498–499, Septembre 2006.

[51] Stef Graillat, Philippe Langlois, and Nicolas Louvet. Fused Multiply and Add implementations of the compensated Horner scheme. In P. Hertling, C.M. Hoffmann, W. Luther, and N. Revol, editors, *Reliable Implementation of Real Number Algorithms : Theory and Practice*, Dagstuhl Seminar 6021, January 2006.

[52] Stef Graillat. Pseudozeros, stability radius and interval polynomials. In *Algebraic and Numerical Algorithms and Computer-assisted Proofs, Dagstuhl Seminar, Germany*, Septembre 2005.

[53] Stef Graillat. Structured perturbations in scalar product spaces. In *Proceedings of the Foundations of Computational Mathematics, University of Cantabria, Santander*, Juillet 2005.

[54] Stef Graillat. Somes results on structured pseudospectra. In *Pseudospectra and Structural Dynamics, University of Bristol*, Décembre 2004.

[55] Stef Graillat and Philippe Langlois. Approximate polynomial problems and associated tools. In *11th GAMM - IMACS International Symposium on Scientific Computing, Computer Arithmetic, and Validated Numerics, Fukuoka, Japan*, Octobre 2004.

[56] Stef Graillat. Some applications of polynomial pseudozero set. In *New Frontiers in Computational Mathematics, University of Manchester*, Janvier 2004.

[57] Stef Graillat. Pseudozéros numériques pour polynômes symboliques. In *Journées Liens Calcul Numérique-Calcul Formel, Toulouse*, Décembre 2002.

Research reports

[58] Stef Graillat, Nicolas Louvet, and Philippe Langlois. Compensated Horner scheme. Rapport de recherche 04, Équipe de recherche DALI, Laboratoire LP2A, Université de Perpignan Via Domitia, France, 52 avenue Paul Alduy, 66860 Perpignan cedex, France, Juillet 2005.

[59] Stef Graillat. Structured condition number and backward error for eigenvalue problems. Rapport de recherche 01, Équipe de recherche DALI, Laboratoire LP2A, Université de Perpignan Via Domitia, France, 52 avenue Paul Alduy, 66860 Perpignan cedex, France, Janvier 2005.

[60] Stef Graillat and Philippe Langlois. More on pseudozeros for univariate polynomials. Prépublication No32, Laboratoire MANO, Janvier 2004.

[61] Stef Graillat and Philippe Langlois. Computation of stability radius for polynomials. Prépublication No31, Laboratoire MANO, Janvier 2004.

Posters

[62] Hao Jiang, Stef Graillat, and Roberto Barrio. Accurate computing elementary symmetric functions. International Symposium on Symbolic and Algebraic Computation (ISSAC 2012), Grenoble, France, July 22-25, 2012.

[63] Stef Graillat, Philippe Langlois, and Nicolas Louvet. Accurate dot products with FMA. 7th Conference on Real Numbers and Computers, LORIA, Nancy, France, July 10-12, 2006.

[64] Stef Graillat. Pseudozero set of multivariate polynomials. 8th International Workshop on Computer Algebra in Scientific Computing, Kalamata, Greece, September 12-16, 2005.

8.2   Talks in seminars

– Amélioration de la précision et validation des algorithmes numériques : le cas du calcul des racines de polynômes
Presented at LIFL, Lille, March 17th, 2014
– Introduction to pseudozeros and pseudospectra
Presented at groupe de travail AriC, LIP, ENS Lyon, October 1st and December 17th, 2013
– New Some results concerning the increase of accuracy and validation of numerical algorithms
Presented at 3D'13, DALI's Doctoral Day, Rivesaltes, November 12th, 2013
– Accurate evaluation of the k-th derivative of a polynomial and its application to the convergence of Newton's method
Presented at Groupe de Travail AriC, LIP, ENS Lyon, July 4th, 2013
– New Accurate and Fast Evaluation of Elementary Symmetric Functions
Presented at Groupe de Travail PEQUAN, LIP6, UPMC, Avril 25th, 2013
– Verified error bounds for multiple roots of systems of nonlinear equations
Presented at Groupe de Travail PEQUAN, LIP6, UPMC, October 14th, 2010
– Accurate simple zeros of polynomials in floating point arithmetic
Presented at the Groupe de Travail Arénaire, LIP, ENS Lyon, April 23rd, 2009
– Accurate and High Performance Computing on the Cell processor
Presented at the Young Investigators Symposium, Oak Ridge National Laboratory, Tennessee, USA, October 13-15, 2008
– Produit précis de nombres flottants
Presented at Rencontres arithmétique de l'informatique mathématique, Lille, 3-5 Juin 2008
– Algorithme de Horner compensé en précision finie et applications
Presented at the "séminaire SPIRAl/SALSA", LIP6, Université Paris 6, 1 juin 2007
– Quelle précision pour le raffinement itératif?
Presented at the "Rencontres arithmétique de l'informatique mathématique", Montpellier, 22 janvier 2007
– Évaluation précise de polynômes en précision finie
Presented at the "séminaire du projet SPACES", LORIA, Nancy, 6 avril 2006
– Accurate polynomial evaluation in floating point arithmetic
Presented at the MIMS Numerical Analysis and Scientific Computing Seminars, The Uni-

versity of Manchester, Manchester, UK, February 10, 2006
– Pseudozéros de polynômes d'intervalles
Presented at the École Jeunes Chercheurs en Algorithmique et Calcul Formel 2005, Montpellier, 4-8 avril 2005
– Pseudozéros de polynômes d'intervalles
Presented at the Journées AriNews, ENS de Lyon, Lyon, 7-8 mars 2005
– Les pseudozéros : application en contrôle et en arithmétique d'intervalles
Presented at the groupe de travail sur les Méthodes Ensemblistes, GDR MACS, ENSAM, Paris, 3 février 2005
– Pseudozéros de polynômes : théorie et applications
Presented at the "École Jeunes Chercheurs en Algorithmique et Calcul Formel", Grenoble, 29 mars - 2 avril 2004
– Quelques applications des pseudozéros de polynômes
Presented at the "séminaire du laboratoire MANO", Université de Perpignan, 25 mars 2004
– Calcul du rayon de stabilité pour les polynômes
Presented at the "Journées AriNews", 17-18 novembre 2003, Lyon
– Calcul algébrique approché, une introduction
Presented at the "journées 4e année", 24 janvier 2003, ÉNS Cachan, antenne de Bretagne

8.3 Review of books

– Review of the book "Numerical methods for roots of polynomials. Part I" by John M. McNamee, Elsevier B. V., 2007. Mathematical Reviews, 2010

9 Teaching experience

At Université Pierre et Marie Curie (2006-present), I taught the following courses :

– LI101 : Recursive programming with Scheme
– LI115 : Introduction to C programming
– LI205 : Introduction to C programming
– LI214 : Discrete mathematics
– LI217 : Scientific computing
– LI313 : Models of sequential programming with Objective Caml
– LI325 : Design of algorithms and applications
– LI329 : Arithmetic, algorithms and applications
– LI347 : Computability and complexity
– LI364 : Algorithmic Techniques in Scientific Computing
– MODEL : Modelling and solving problems with numeric and symbolic tools via Maple and MATLAB
– CINAP : Numerical validation for high performance computing
– NI515 : Numerical validation of scientific softwares
– AROR : Computer arithmetic

At Université de Perpignan (2003-2006), I taught the following courses :

– Computer tools for sciences
– Programming in Ada
– Mathematics for computer science
– Introduction to LaTeX
– Unix and LaTeX

10 Miscellaneous

10.1 Organization of conferences and program commitee

– Organisation of the Arinews days at Perpignan in 2002 and 2005
– Member of a program commitee : PASCO 2010, SNC 2011, SYNASC 2011 (Numerical computing track), SYNASC 2012 (Numerical computing track)

10.2 *Referee*

– Reviewer for *Mathematical Reviews* and *Zentralblatt MATH*
– Reviewer for the international journals *Journal of Global Optimization, Journal of Computational and Applied Mathematics, European Journal of Control, SIAM Journal on Matrix Analysis and Applications, SIAM Journal on Scientific Computing, Theoretical Computer Science, IEEE Transactions on Computers, BIT Numerical Mathematics, Journal of Symbolic Computation, Numerical Algorithms, Applied Mathematics and Computation, Applied Numerical Mathematics, Reliable Computing, Linear Algebra and Applications, Applied Mathematics Letters, Mathematics of Computation, Biomath*
– Reviewer for the international conferences *ACM SAC 2006*, LNCS special issue of *PARA'06, ISSAC 2007, ISSAC 2008, RNC 2008,ISSAC 2009, PASCO 2010, PARA 2010, ARITH 2011, SNC 2011, SYNASC 2011, ISSAC 2012, ISSAC 2014*