

Associate Professor

Laboratoire de l'Informatique du Parallélisme (LIP)

École Normale Supérieure (ENS) de Lyon

46 allée d'Italie, 69364 Lyon Cedex 07, France

Phone: +33 (0) 47272 8758, +33 (0) 60209 8623

E-mail: Anne.Benoit@ens-lyon.fr

Homepage: <http://graal.ens-lyon.fr/~abenoit>

Professional experience and education

- **Oct. 2009-Present:** Junior member of the **Institut Universitaire de France**.
- **July 2009:** “**Habilitation à Diriger des Recherches**” at École Normale Supérieure de Lyon, France, entitled *Scheduling pipelined applications: models, algorithms and complexity*.
- **Sept. 2005-Present:** **Associate Professor**, LIP, École Normale Supérieure de Lyon, France. **Roma project:** *Resource Optimization: Models, Algorithms, and scheduling*.
- **Sept. 2003-Aug. 2005:** **Research Assistant**, School of Informatics, University of Edinburgh, Scotland. **Enhance project:** *Enhancing the Performance Predictability of Grid Applications with Patterns and Process Algebras*, with Murray Cole, Jane Hillston and Stephen Gilmore.
- **Oct. 2000-Sept. 2003:** **PhD in Computer science: Systems and Communications** in the Institut National Polytechnique de Grenoble, defended the 18th June 2003, entitled *Methods and algorithms for the performance evaluation of systems with a large state space*. Supervisor: Brigitte Plateau (ID-IMAG laboratory, Grenoble, France).
- **1999-2000:** “**Diplôme d’Etudes approfondies**” (DEA) of Computer science: Systems and Communication (prerequisite for the Ph.D); passed with “Excellent”; University Joseph Fourier, Grenoble, France. **DEA (master) project**, ID-IMAG laboratory, under the supervision of Jacques Chassin de Kergommeaux: *Study of interactions between the Athapascan-0 tracing tool and the traced applications*.
- **1997-2000:** **École Nationale Supérieure d’Informatique et de Mathématiques Appliquées de Grenoble (ENSIMAG)**, INPG, Grenoble, France. Equivalent to a Master’s Degree in Computer Science, Emphasis in Systems and Networks; passed with “Excellent”. Summer 1999: 8 weeks training period at Caltech (California Institute of Technology), Pasadena, USA. Summer 1998: 6 weeks training period at IRAM (Institute for Research in Millimeter Astronomy), Grenoble, France.

Research projects

- **2011-Present:** Member of the **Rescue** ANR project: “Resilience for exascale scientific computing”.
- **2009-2010:** Responsible of the Lyon partner in the **ALEAE** ARC INRIA project: “Handling uncertainties in large-scale distributed systems”.
- **2008-2010:** Co-project investigator of the **StochaGrid** ANR project: design of new stochastic models that will allow for an accurate prediction of the performance of workflow applications on grid computing platforms, and new scheduling algorithms.
- **2007-2009:** Project leader of the **SchedLife** CNRS/USA project: “Symbiotic scheduling of biological grid applications”.
- **2006-2009:** Member of the **Alpage** ANR project: “Algorithms for large-scale platforms”.
- **2004-2008:** Member of **CoreGRID**, European Network of Excellence.
- **2003-2005:** Research assistant as part of the **Enhance** project: “Enhancing the performance predictability of grid applications with patterns and process algebras”.
- **2002-2003:** **DECORE** IMAG-ELESA project: task coordinator “Exploiting the symmetries in communication network models”.

Teaching

- **Sept. 2005-Present:** Teaching algorithms, parallel algorithms, systems and networks, and algorithms for networks and telecommunications at ENS Lyon, and tutoring students.
- **Sept. 2006-2010:** Responsible of 3rd year computer science students at ENS Lyon (École Normale Supérieure de Lyon, France).
- **2004-2005:** Tutoring on an Enterprise Computing course at the University of Edinburgh.
- **Oct. 2000-Sept. 2003:** Gave computer science lectures at ESISAR (INPG, Valence, France) and at ENSIMAG (INPG, Grenoble, France): algorithms, compilation, performance evaluation.

Research

- 30 papers in international journals, 64 papers in international conferences (all my publications are available at graal.ens-lyon.fr/~abenoit/).
- Post-doctoral students: Hinde Bouziane (2009-2010), on the scheduling of linear chain pipelined applications with replication to increase the reliability, while meeting some performance requirements; Hinde is now assistant professor at University of Montpellier 2.
Mourad Hakem (2007-2008), on the multi-criteria scheduling of precedence task graphs in heterogeneous systems with realistic communication models; Mourad is now assistant professor at IUT Belfort.
- PhD students: Guillaume Aupy (2011-), on energy-aware scheduling under reliability and makespan constraints. Paul Renaud-Goud (2009-2012), on power-aware scheduling of streaming applications. Fanny Dufossé (2008-2011), on complexity and algorithms of scheduling for reliability. Veronika Rehn-Sonigo (2006-2009), on the multi-criteria mapping and scheduling of workflow applications.
- Member of the **Editorial Board** (Associate Editor) of JPDC, the Journal of Parallel and Distributed Computing, since 2011, and of SUSCOM, the Journal of Sustainable Computing, since 2013.
- **Conference chairing:** Program vice-chair of IPDPS 2014, Algorithms track; Workshops co-chair of ICCP 2014 and ICCP 2013; Program vice co-chair of IEEE Cluster 2012; Program vice-chair of AINA 2012; Member of the organizing committee of SIAM PP 2012; Program chair of the HCW 2010 workshop, and general chair of HCW 2011 (in conjunction with IPDPS); co-organizing the workshop “Scheduling for large-scale systems” 2009; co-organizing the PAPP workshops, co-located with ICCS, from 2010 to 2006.
- **Conference program committees:** PC member for Ena-HPC 2014; PDP 2014; HCW 2014-2013; CCGrid 2014 to 2012; ICCP 2013; IGCC 2013; ICPE 2013; CLOSER 2013; IPDPS 2013 to 2010 and 2008; HPDC 2012; HiPC 2013-2011-2010; SPAA 2011; ICCS 2010 to 2005; APDCM 2010; HPCC 2009; ISPDC 2009; ISCIS 2009; TCPP PhD Forum 2009; SBAC-PAD 2008.
- **Reviewing:** Reviewer of several international journals, conferences and workshops, such as CCPE, DAM, FGCS, IJCS, IJFCS, IJHPCA, ITOR, JPDC, JPEDS, JSS, Parco, PPL, TODS, TPDS, TSE, ... APDCM, CC, CCGrid, CLOSER, CMPP, DAC, EuroPar, HCW, HiPC, HLPP, HPCC, HPDC, ICCS, ICDCS, ICPADS, ICPE, ICCP, IPDPS, ISCIS, ISPDC, MAM, NSMC, PAPP, PNPM, SBAC-PAD, SPAA, STACS, ...

Awards

- **June 2010:** I became a **Senior Member** of the IEEE.
- **Feb. 2010:** **Best paper award** of the ISPDC’2010 conference for the paper entitled “Optimizing the reliability of pipelined applications under throughput constraints” (A. Benoit, H. L. Bouziane, Y. Robert).
- **Aug. 2009:** **Best paper award** of the HeteroPar’2009 workshop for the paper entitled “Resource allocation for multiple concurrent in-network stream-processing applications” (A. Benoit, H. Casanova, V. Rehn-Sonigo, Y. Robert).
- **2007-2011:** **Prime d’encadrement doctoral et de recherche.**
- **2005:** **Outstanding thesis award** by the Institut National Polytechnique de Grenoble for my PhD thesis.