Anne Benoit — CURRICULUM VITAE

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Associate Professor (MCF HC)
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Mother of two girls, born in 2012 and 2014

Professional experience and education

• **Oct. 2023-2028:** Senior member of the **Institut Universitaire de France**.
• **Sept. 2005-Present: Associate Professor**, LIP, École Normale Supérieure de Lyon, France. Roma project: *Resource Optimization: Models, Algorithms, and scheduling*.
• **Aug. 2017-2018:** Visiting Associate Professor at **Georgia Inst. of Technology, Atlanta, USA**.
• **Oct. 2009-2014:** 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. 2003-Aug. 2005: Research Assistant**, School of Informatics, University of Edinburgh, Scotland, working with M. Cole, J. Hillston and S. Gilmore.
• **Oct. 2000-Sept. 2003: PhD in Computer science: Systems and Communications** in the Institut National Polytechnique de Grenoble, defended June 18, 2003, entitled *Methods and algorithms for the performance evaluation of systems with a large state space*.
Supervisor: Brigitte Plateau (ID-IMAG laboratory, Grenoble, France).
• **2000: Graduation from both ENSIMAG** (engineer's school, equivalent to a Master's Degree in Computer Science), and **"Diplôme d'Etudes approfondies"** (DEA) of Computer Science: Systems and Communication (research master); Both passed with "Excellent".

Research projects

• **2022-Present:** Member of the PEPR **NumPEx** (Numeric for Exascale) program in France, whose goal is to develop state-of-the-art skills and infrastructures in the field of exascale computing (see https://numpex.org).
• **2022-2024: FACCTS** research collaboration with **A. Chien at U. Chicago**: *Foundational Models and Efficient Algorithms for Scheduling with Variable Capacity Resources*, funded by the France Chicago Center (see https://fcc.uchicago.edu/).
• **2023-2024:** Additional funding as part of our collaboration with A. Chien to organize **two workshops** on the topic *Bridging Communities — Scheduling Variable Capacity Resources for Sustainability,* in the U. Chicago center in Paris (2023-24). These workshops are funded by the International Institute of Research in Paris.

• **2020-Present:** Member of **PeachTree** Inria Associate Team with GeorgiaTech, USA, on sparse tensor computations (combinatorial tools, scheduling, and numerical algorithms).
• **2016-Present:** Leading the project *Optimization of fault-tolerance strategies for workflow applications* inside the **JLESC** (Joint Laboratory for Extreme Scale Computing),
see https://jlesc.github.io/projects/ft_workflow_project/.
• **2016-2018:** Principal investigator of the **Keystone** Inria Associate Team with Vanderbilt University, USA, on *Scheduling algorithms for sparse linear algebra at extreme scale*.
• **2015-2018:** Member of the **ELCI** project, a French software project that brings together academic/industrial partners to provide a software environment for the next HPC systems.
• **2011-15:** Member of the **Rescue** ANR project: *Resilience for exascale scientific computing*.
• **Older projects:** Responsible of the Lyon partner in the **ALEAE** ARC INRIA project: *Handling uncertainties in large-scale distributed systems* (2009-10); Co-project investigator of the **StochaGrid** ANR project (2008-10); Project leader of the **SchedLife** CNRS/USA project: *Symbiotic scheduling of biological grid applications* (2007-09); Member of the **Alpage** ANR project: *Algorithms for large-scale platforms* (2006-09); Member of **CoreGRID**, European Network of Excellence (2004-08); Research assistant as part of the **Enhance** project: *Enhancing the performance predictability of grid applications with patterns and process algebras* (2003-05); **DECORE** IMAG-ELESA project: task coordinator - *Exploiting the symmetries in communication network models* (2002-03).

Teaching responsibilities

• **Sept. 2022-2023:** Chair of the Computer Science (CS) Department at ENS Lyon (École Normale Supérieure de Lyon, France) — Elected for one year.
• **Sept. 2018-22 (& 2006-10):** Responsible of 3rd year (L3) CS students at ENSL.
• **Sept. 2015-2017:** Responsible of the Master of Computer Science at ENS Lyon.

Teaching

• **Sept. 2005-Present:** Teaching algorithms, parallel and distributed algorithms and programs, systems and networks, algorithms for networks and telecommunications, and resilient and energy-aware scheduling algorithms at ENS Lyon, and tutoring students, approx. 192 hours per year including teaching responsibilities.
• **2020-2022:** Teaching *Scheduling: Theory, Algorithms, and Systems* at Supélec Paris for Safran engineers, as part of a curriculum on Advanced Artificial Intelligence.
• **2017-2018:** Teaching algorithms at Georgia Institute of Technology, Atlanta, USA.
• **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, Fr) and at ENSIMAG (INPG, Grenoble, Fr): algorithms, compilation, performance evaluation.

Research and professional service

• 55 papers in international journals, 107 papers in international conferences, one book (all my publications are available at graal.ens-lyon.fr/~abenoit/).
• Students: 13 PhD students, with 11 thesis already defended and 2 on-going PhD students, and 5 post-doctoral students.
• Elected **Chair of the IEEE Technical Committee on Parallel Processing**, for 2020-2024.
• **Editor-in-Chief** of ParCo (Parallel Computing) since 2024; **Associate-Editor-in-Chief** of JPDC (Journal of Parallel and Distributed Computing) 2022-2023; of ParCo (Parallel Computing) 2018-2023s; Member of the **Editorial Board** (Associate Editor) of TOPC, ACM Transactions on Parallel Computing (2024-2026); of TPDS, IEEE Transactions on Parallel and Distributed Systems (2015-2019); of JPDC (2011-2018); and of SUSCOM, the Journal of Sustainable Computing (2013-2017).
• **Steering committees:** Member of the steering committees of IPDPS and HCW since 2019, and of HeteroPar since Nov. 2021.
• **Conference chairing:** EuroPar'24 track chair (Scheduling, Resource Management, Cloud, Edge Computing, and Workflows); Member of the organizing committee of SIAM ACDA'23; Program area co-chair (parallel and distributed algorithms for computational science) of IPDPS'23; Chair of the graduate student research competition (SRC) posters at SC'22; **General chair of IPDPS'22**; Poster chair of ICPP'21; Track chair of ISC High Performance'20 (HPC Algorithms track); Global chair for Scheduling and Load Balancing topic of EuroPar'18, **Program chair of IPDPS'18**; **Technical papers chair of SC'17**; Program chair of ICPP'17; Program chair of HiPC'16; Program vice-chair of SC'16, Algorithms track; Program vice-chair of HiPC'15, Algorithms track; Program vice-chair of SBAC-PAD'15, Applications and Algorithms track; Program vice-chair of IPDPS'14, Algorithms track; Workshops co-chair of ICPP'16-13; Program vice co-chair of IEEE Cluster'12; Program vice-chair of AINA'12; Member of the organizing committee of SIAM PP'12; Program chair of the HCW'10 workshop, and general chair of HCW'11 (in conjunction with IPDPS); co-organizing a workshop in Knoxville'09; co-organizing PAPP workshops (co-located with ICCS) 2010-06.
• **Conference program committees:** PC member for IPDPS'08, '10-13, 16-21; SC'15, '19, '21-22; ESA'19; HCW'13-15; CCGrid'12-15; Ena-HPC'14-15; FEEDBACK'15; PDP'14; ICPP'13; IGCC'13; ICPE'13; CLOSER'13; HPDC'12; HiPC'10-11, '13; SPAA'11; ICCS '05-10; APDCM'10; HPCC'09; ISPDC'09; ISCIS'09; TCPP PhD Forum'09; SBAC-PAD'08.
• **Reviewer** for the main international journals and conferences of my field.
• **Other:** Member (3 times) and reviewer (9 times) for PhD committees; Member of committees to recruit associate professors and researchers in France (6 times) and abroad (once); Expert for the European Commission to evaluate proposals and projects (3 times); Member of the selection committee for the IEEE CS TCHPC early career researchers award for excellence in HPC in 2022; Member of the organizing committee of ACDA online seminar series since 2022; Member of IEEE Future of Conferences Ad Hoc Committee, formed by IEEE CS president in 2022, to identify and recommend future models for conferences.

Awards

• **2019: IEEE TPDS Award for Editorial Excellence** to recognize exceptional contributions by members of the TPDS Editorial Board.
• **2015-2023**, and **2007-2011: Prime d'encadrement doctoral et de recherche**.
• **June 2010:** I became a **Senior Member** of the IEEE.
• **2005: Outstanding thesis award** by INPG for my PhD thesis.
• **Best paper awards:**
  - A. Benoit, L. Perotin, Y. Robert, H. Sun. Online Scheduling of Moldable Task Graphs under Common Speedup Models. Best paper award at ICPP'22, the Int. Conf. on Parallel Processing, Bordeaux, France, August 2022.
  - A. Benoit, V. Le Fèvre, P. Raghavan, Y. Robert, H. Sun. Design and comparison of resilient scheduling heuristics for parallel jobs. APDCM'20 Best Paper (a satellite workshop of IEEE IPDPS, May 2020).
  - A. Benoit, H. L. Bouziane, Y. Robert. Optimizing the reliability of pipelined applications under throughput constraints. Best paper award at ISPDC'2010, the 9th Int'l Symposium on Parallel and Distributed Computing, Istanbul, Turkey, July 2010.
  - A. Benoit, H. Casanova, V. Rehn-Sonigo, Y. Robert. Resource allocation for multiple concurrent in-network stream-processing applications. Best paper award of the HeteroPar'2009 workshop, the 7th Int'l Workshop on Algorithms, Models and Tools for Parallel Computing on Heterogeneous Platforms, Delft, The Netherlands, August 2009.