CURRICULUM VITAE

Prof. Olivier-Gilles MARIN, PhD

Citizenship: French
Residency: Permanent Residence Permit (China)

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Short Bio

I am a computer scientist specializing in distributed systems, collective AI, and scalable computing infrastructures. My work combines theoretical models of distributed coordination with the design and deployment of practical, fault-tolerant middleware. I am particularly interested in how collective intelligence emerges in large-scale systems, from cloud and edge computing to distributed learning environments. My current projects explore scalable consensus algorithms, resilient AI architectures, and the intersection of distributed computing with quantum communication.

University degrees

- **Doctor Europaeus PhD in Computer Science**, Université du Havre, France – 2003
- **MSc in Distributed Systems**, Université Paris 6 - Pierre & Marie Curie, France – 2000
- **Joint Honours BSc in Mathematics and Computer Science**, University of Swansea, Wales, UK & Université de Besançon, France (Erasmus Exchange Scholarship) – 1998

Academic appointments

- **Maître de Conférences (*tenured)*, Sorbonne Université, France** – 2004 - present
  Permanent faculty position in Computer Science – *Currently on leave while serving in China*
  Courses: Operating Systems (UG/Grad), Distributed Algorithms, Dependability, Software Engineering, Programming
- **Professor of Practice in Computer Science, NYU Shanghai, China** – 2018 - present
  Built the undergraduate Computer Science curriculum from the ground up.
  Courses: Operating Systems, Distributed Systems, Computer Architecture, Introduction to Programming, Senior Projects

- **Associate Dean of Arts and Sciences, NYU Shanghai** – 2022 - 2024
- **Interim Dean of Arts and Sciences, NYU Shanghai** – 2021 - 2022
- **Associate Professor of Practice in Computer Science, NYU Shanghai** – 2015 - 2018
- **Postdoctoral Researcher, Vrije Universiteit, Amsterdam** – 2003 - 2004

Leadership Roles

- **Head of Computer Science**, NYU Shanghai; Built CS undergraduate program from inception
- **Interim Dean & Associate Dean**, Arts & Sciences, NYU Shanghai
- **Area Head & Undergraduate Coordinator**, Mathematics, NYU Shanghai
- **Vice-President, Faculty Recruitment Committee**, Sorbonne Université
- **Co-chair, CS Undergraduate Curriculum**, Sorbonne Université

Current Funded Projects

ANR PRC – FrugalDiNet (2024–2027)

Co-PI, collaboration with three French institutions. This project develops frugal distributed algorithms at the network layer using intelligent hardware such as programmable switches and Data Processing Units (DPUs). My contribution focuses on leveraging low-level telemetry (bandwidth, latency, buffering) to design cooperative algorithms for fault detection and load monitoring across datacenters, enhancing resilience and scalability with minimal overhead.

NSFC – Scalable Collective AI (2025–2028)

Collaboration with Dr. Mathieu Lauriere, NYU Shanghai. This project studies learning and coordination in large populations of agents via mean-field games and reinforcement learning. I lead the distributed simulation and algorithmic implementation side, building architectures that enable large-scale experiments to validate and extend theoretical results, with applications in economics, finance, and network optimization.

Graduate Supervision

12 MSc theses in distributed systems, 3 PhD students defended:

Rudyar Cortès (2017): **Scalable location-temporal range query processing**

Maxime Véron (2015): **Scalable services for massively multiplayer online games**

Erika Rosas (2012): **Building trustworthy services in peer-to-peer networks**

Grants & International Collaborations (selected)

- ANR PRC – FrugalDiNet, partner institution PI (2024–2027)
- Inria/CONICYT Associate Team ARMADA (Chile), PI (2014–2017)
- PHC MAIMONIDE (France/Israel), French PI (2014–2016)
- Multiple doctoral grants (France/Chile/CONICYT, Inria, French Ministry of Higher Ed.)
- Eurocontrol FTATC (Fault-Tolerant Air Traffic Management), Vice-Coordinator (2006–2007)

Service & Recognition

- University awards: Excellence in Teaching (2010), Excellence in Research (2009, 2013)
- Over 60 Program Committee memberships since 2003 (ICDCS, ICPADS, NCA, etc.)
- Invited talks at Microsoft Research Asia, Tsinghua, Fudan, Yahoo Labs Chile, among others
- Tutorial Chair, SOSP 2017
- Editorial Board, IEEE Distributed Systems Online (2003–2008)

Selected Publications (*Full publication list available upon request*)

1. P. Sens, L. Arantes, A. G. De Moraes Rossetto, O. Marin (2024) *Stab-FD: A cooperative and adaptive failure detector for wide area networks*, **Journal of Parallel and Distributed Computing (JPDC)** 186.
2. Xiaonan Li, Olivier Marin (2022) *Towards Implementing ML-Based Failure Detectors* In: 18th **European Dependable Computing Conference (EDCC)**
3. Leyi Sun, Yifan Zhuo, Olivier Marin (2021) *Simple yet Efficient Deployment of Scientific Applications in the Cloud*, 27th **IEEE International Conference on Parallel and Distributed Systems (ICPADS)** Beijing, China.
4. X Bonnaire, R Cortes, F Kordon, O Marin (2017) *ASCENT: a Provably-Terminating Decentralized Logging Service*, **The Computer Journal** 60: 12. 1889–1911
5. Florent Coriat, Anne Fladenmuller, Luciana Arantes, Olivier Marin (2016) *Crowdsourcing-based architecture for post-disaster Geolocation: a comparative performance evaluation* In: 15th **IEEE International Symposium on Network Computing and Applications (NCA)**.
6. Luciana Arantes, Roy Friedman, Olivier Marin, Pierre Sens (2015) *Probabilistic Byzantine Tolerance for Cloud Computing* In: 34th **International Symposium on Reliable Distributed Systems (SRDS)**.
7. Samir Aknine, Olivier Marin (2005) *Role of Replication Planning for Fault Tolerant Multiagent Systems*, **Symposium on Adaptive Agents and Multi-Agent Systems (AAMAS)**.
8. Marin Bertier, Olivier Marin, Pierre Sens (2003) *Performance Analysis of a Hierarchical Failure Detector*, **International Conference on Dependable Systems & Networks (DSN)**.