Kevin Zagalo

(updated in January 2023)

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Research field: Real-time systems, Queueing theory

Key-words | *real-time scheduling, probabilistic real-time systems, scheduling knowledge, analytical DMP, multiprocessor scheduling, DMP-driven bin-packing, …*

Other knowledge | *Linux, embedded systems, Internet of Things, networking, Docker, …*

Education

Ph. D. degree | KOPERNIC *team of Inria Paris, and Sorbonne Université.*

Ph.D. thesis: *Stochastic analysis of stationary real-time systems*, under the supervision of Liliana Cucu-Grosjean (Inria Paris) and Avner Bar-Hen (Cnam):

- ▷ definition of the domain of feasibility of stationary real-time systems,
- ▷ approximation of the distribution of the response times of a real-time system using queueing theory limit theorems,
- ▷ parametric estimation of the parameters of the response times distributions of a real-time system and associated EM algorithm,
- ▷ application to multiprocessor scheduling using DMP-driven bin-packing

2020 - 2023 (expected)

Master degree | *Probabilities and stochastic analysis, Sorbonne Université.*

Master thesis: *The Ulam-Hammersley problem*, under the supervision of Quentin Berger (LPSM).

2016 - 2019

Bachelor degree and Master 1 | *Mathematics and applications, UPMC.* 2012 - 2016

Technical institute | *Computer science, Université de Paris.* 2010 - 2012

Teaching

Introduction to machine learning (tutorials) | *ESIEE, Université Gustave Eiffel.* 2022

Probabilities (tutorials) | *ESIEE, Université Gustave Eiffel.* 2022

Introduction to machine learning (tutorials) | *ESIEE, Université Gustave Eiffel.* 2020

Intern students Olena Verbytska, *Mélanges inverse Gaussiens pour les temps de réponses de systèmes temps-réels périodiques* (2022) ; Margarita Tomina, *Inverse gaussiennes multivariées appliquées aux temps de réponses de systèmes temps-réels à priorités fixes* (2022) ; Marc-Antoine Auvray, *Prédiction de temps d'executions d'un autopilote de drone à partir de données sensorielles* (2022).

Committees

Local organization of Real-Time Systems Symposium (RTSS) | *Houston, TX*	2022
Web chair of Real-Time Networks and Systems (RTNS) | *Paris*	2022
Workshop committee member of the Junior Researcher Workshop on Real-Time Computing (JRWRTC) | *Paris*	2022
Workshop committee member of JRWRTC | *Nantes*	2021
Local organization of RTNS |*Paris*	2020

Employment

Research intern | *Inria, Paris.*	10.2019 - 12.2019
Engineering intern | *Computer Vision, Fotonower, Paris.*	04.2019 - 07.2019
Tutor for exiled people | *Sorbonne Université, Paris.*	10.2018 - 02.2019
9th grade mathematics teacher | *Jacob Safra High School, Paris.*	09.2016 - 12.2016

Publications list

Preprints

- Kevin Zagalo, Olena Verbytska, Liliana Cucu-Grosjean and Avner Bar-Hen. *Response Times Parametric Estimation of Real-Time Systems.* hal-03839408, arXiv:2211.01720.

Publications

- Kevin Zagalo, Yasmina Abdeddaïm, Avner Bar-Hen, Liliana Cucu-Grosjean. *Response Time Stochastic Analysis for Fixed-Priority Stable Real-Time Systems.* IEEE Transactions on Computers, Institute of Electrical and Electronics Engineers, 2022, pp.1-12. hal-03797980, 10.1109/TC.2022.3211421.
- M. W. El Khazen, K. Zagalo, H. Clarke, M. Mezouak, Y. Abdeddaïm, A. Bar-Hen, S. Ben Amor, R. Bennour, A. Gogonel, K. Kougblenou, Y. Sorel, L. Cucu-Grosjean, *Work in Progress: KDBench - towards open source benchmarks for measurement-based multicore WCET estimators*, 2022 IEEE 28th Real-Time and Embedded Technology and Applications Symposium (RTAS), 2022, pp. 309-312, 10.1109/RTAS54340.2022.00035.
- Kevin Zagalo, Liliana Cucu-Grosjean, Avner Bar-Hen. *Identification of execution modes for real-time systems using cluster analysis.* 25th IEEE International Conference on Emerging Technologies and Factory Automation, ETFA, Sep 2020, Vienne, Austria. hal-02938202, 10.1109/ETFA46521.2020.9211983.

Other

Languages \| *French, Portuguese (native), Spanish (professionnal level), English (fluent).*
Computer language \| *LaTeX, Python, SQL, Shell, Git.*