Maxime Raynal

Computer Science & Applied Mathematics

Education

2018–2019 **Master in Applied Mathematics**, *ENSIMAG / University of Grenoble-Alpes*.
Ongoing, speciality Operations Research, Combinatorics & Optimisation

2017–2018 **Maîtrise in Computer Science**, *ENSIMAG / University of Grenoble-Alpes*.
Master of Science of Informatics in Grenoble ; Mention B; rank 2/44

2015–2017 **Bachelor in Informatics**, *University of Grenoble-Alpes*.
Mention TB (highest distinction) ; rank 1/92

Publications

A. Bouillard, M. Buob, M. Raynal, and A. Salaün. Log analysis via space-time pattern matching. In *2018 14th International Conference on Network and Service Management (CNSM)*, pages 303–307, Nov 2018.

Patents

A. Bouillard, M. Buob, M. Raynal: DIG-DAG construction for root-cause analysis. Patent application 18165685.1. Nokia Bell Labs, 2018

Professional experience

2020 **Research Engineer / PhD student**, *Nokia - Bell Labs & LIG*, Paris/Grenoble.
PhD in Mathématics & Computer Science on the subject: "Alarm prediction in communication networks via space-time pattern matching and explainable machine learning" under the direction of Georges Quénot at the LIG and Marc-Olivier Buob & Élie de Panafieu at Nokia.

2017–2020 **Assistant teacher**, *Grenoble University*.
Assistant teacher in Mathematics & Informatics in Grenoble University.

Février - Août 2019 **Research Engineer**, *Laboratory G-SCOP*, Grenoble.
Research & implementation of a software prototype on the Erdös-Sand-Sauer-Woodrow conjecture (monochromatic reachability in arc-colored digraphs) with A. Newman & A. Sebo.

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2019, ongoing **Research Engineer Intern**, *Naver Labs Europe*, Meylan.
Internship of 6 months on the subject : 'Multicriteria Journey Planning in Multimodal Public Transit Networks'. Distinguished for the 'Naver Labs Europe Intern Day Award 2019'

Summer 2018 **Research Engineer Intern**, *VERIMAG lab*, Grenoble.
Internship of 4 months on the subject : 'Accurately Predicting I-cache Timing Attacks Vulnerability'.

Summer 2017 **Research Engineer Intern**, *Nokia-Bell Labs*, Paris.
Internship of 3 months on the subject : 'Alarm Prediction via Space Time Pattern Matching'. Published a paper in CNSM 2018, method patented by Nokia-Bell Labs for internal use.

2005–2015 **Circus arts teacher / Circus artist**.
Circus arts teacher for kids & adults, mainly in Circomobile (Annecy).
Circus artist : cabarets, theatres, street shows in France, Germany, Norway, Greece, Turkey, Thailand, England....

Computer Science & Applied Mathematics

Specialities Algorithmics, Graph Theory, Theory of Languages, Machine Learning, Deep Learning, Operations Research ...

Languages C/C++, Python, Rust, Java, X8086/LLVM, Ocaml, Cplex/Ilog, bash ...

Softs/utils git, emacs, gdb/radare2, Cplex, PyTorch, bison/flex, jupyter, latex, openMP, Open MPI, wireshark, RabbitMQ/pika, numpy, scipy, sk-learn ...

Maths Combinatorics, Arithmetics, Convex Optimisation, Probas/Stats ...

OS Uses Ubuntu since 12.04. Good bases with Windows & IOS

Languages

French **Native**

Anglais **Fluent (C2)** *Lived 4 years abroad ; language spoken at home*

Interest / Hobbies

Circus 24 years of practice : juggling, balancing, acrobatics, theatre. Conferences on the theme "The mathematics of juggling", and organization of events in Grenoble's schools to show kids links between juggling and maths.

Associative life Treasurer of the association Argument Massue in Grenoble from 2016 to 2019. Member of the bureau of the association Circomobile, in Annecy(Fr) from 2006 to 2011. Co-organizes circus arts festivals around Grenoble.

Moutain Hiking & climbing.

Botanic Aromatic plants & fruit trees culture, essential oils production on my field in southern France. Viticulture & Wine making.

Programming Volunteer at the programming contest of the IM2AG (Institute of Mathematics & Applied Mathematics of Grenoble) and at the GreHack (IT security conference and contest of Grenoble).

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