

# Laurie Lugrin

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## Software developer

## Skills

- **Personal skills:**

- Fast and enthusiastic learner.
- Both analytical and creative thinker.
- People-oriented and cooperative.
- Calm, articulate.

- **Programming languages:**

- C, C++, Python, Java, ADA, OCaml, Prolog, unix shell.

- **Theory:**

- Artificial Intelligence: machine learning, knowledge representation, reasoning.
- Formal methods: model-checking, abstract interpretation, temporal logics ( $\mu$ -calculus, CTL).

- **Languages:**

- French: mother tongue.
- English: experienced (B2 European level CEFRL).

## Work experience

*Oct 2009 – Dec 2010* Engaged in a PhD about **energy consumption** of wireless networks and more  
(15 months) generally embedded systems, supervised by F. Maraninchi and L. Mounier, at Verimag (Grenoble, France).

- *Research and development:* proposed a comparison basis for energy consumption models and an algorithm for it; implemented the algorithm in Python; studied the datasheet of the radio device CC1100 to confirm the performance of my implementation.
- *Talks:* gave many presentations of my Ph.D. work, to 15 to 30-person audiences in English as well as in French.
- *Teaching:* taught 90 hours of tutorials and practical works (algorithmic and programming in C, formal languages).

- 2008 – 2009* Taught tutorials in Computer Science for 1<sup>st</sup>- and 2<sup>nd</sup>-year students having difficulties, alongside my studies (in groups and individual classes).
- Summer 2008 (3 months)* Contributed to a software **model checker** (~30k lines of Java): I implemented a new semantics of  $\mu$ -calculus and compared its performance (time, precision) w.r.t. the standard semantics, as an intern at the university of Toronto, Canada.
- Feb 2008* Designed and implemented a **compiler** from a functional language with process parallelism (the *happy language*) to C. Written in Java with 4 other students.
- Summer 2007* Worked for a community of cities, at the reception and at the tourism departement.
- May-June 2007* Designed and implemented the **puzzle game** Blokus. Written in Ada with 5 other students.
- Summer 2006* Contributed to **intelligent tutoring system** for surgeons, as an intern at LIG (Grenoble, France): I designed and implemented a **database** in SQL. I also initiated a web site in XHTML/CSS2.
- Summer 2005* Worked in a papermaking industry, at the transportation service.

## Personal projects

- Since Oct 2010* Designed a frogger game on **FPGA**. I conducted a requirement analysis, wrote a prototype in C/SDL, I am using the version control system Git and coding in VHDL.
- Late 2008* Developed in Python an **IRC bot** which makes rhymes and funny remarks interacting with the discussion.
- Summer 2007* Developed of a **snake game** in Python/Pygame.

## Education

- 2007 – 2009* *Master* (equivalent to a masters) in Computer Science, option Artificial Intelligence and Web, with high honors – Université Joseph Fourier, Grenoble, France.
- 2004 – 2007* *Licence* (3-year diploma) in Computer Science, with high honors – Université Joseph Fourier, Grenoble, France.
- 2004* *Baccalauréat scientifique* (equivalent to High School diploma), with honors – Lycée de la Versoie, Thonon-les-bains, France.

## Hobbies

- Music, playing the guitar.
- Sports: badminton, via ferrata.
- Juggling: member of the juggling association *Argument Massue*. I conducted initiation workshops.