

Soufiene Benkirane

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Nationality: French

Marital status: Single

Date of birth: 21/03/1984

**Engineer in Computer Sciences and Applied Mathematics
MSc in Bioinformatics****Introduction:**

I have a strong interest in both computer science and mathematics. In the last three years, I used my knowledge in those areas in my PhD in modelling and epidemiology, which I expect to submit at the end of September. Now, I would like to use the skills I have developed, as well as expand my knowledge in programming. While I am not a very experienced developer, I am very keen to learn new languages in a challenging environment.

Computing and Mathematical skills:

Knowledge of process algebra (PEPA), Java, JavaCC, Mathematica, C, Matlab, Fortran, SQL, some assembly languages.

Methods: Search in a graph (A^* , ...) , evolutionary algorithms, neural network, swarm intelligence, cellular automaton, pair-wise alignment search.

Education:

2007 to date: PhD student in the Computing Science and Mathematics at the University of Stirling. Expected submission date: October 2010.

My PhD consists of testing how well a mathematical modelling tool performs in disease modelling.

2006-2007: MSc in Bioinformatics, Heriot-Watt University.

The main focus here were both biology applied to mathematics (artificial intelligence) and mathematics applied to molecular biology.

2004-2007: Master's degree in computer sciences and Applied Mathematics, from ENSEEIHT (National Polytechnic Engineering Institute of Electrotechnology, Electronics, Computer Sciences, Hydraulics and Telecommunication and Networks), Toulouse, France.

The University's objective is to teach the basics of a wide range of programming languages, the mathematics used in computer sciences. It also focused on projects assignments in teams with 2 to 5 students.

2002-2004 : Lycée La Martinière Monplaisir, Lyon, France. Classes Préparatoires:

Preparatory Classes for entrance into French National Engineering Schools.

These two years are strongly focused on Mathematics and Physics, but I have also taken the optional computer sciences classes, which were very theoretical.

2002: Baccalauréat in Sciences
Equivalent to ‘A’ levels in Mathematics, Physics and Chemistry.

Relevant experience:

2010: Participation in the GRADschool program, which focuses on how to work effectively as a member of a team.

2007: Dissertation at Heriot-Watt University (Edinburgh). Title: Discovering Rules in Proteomics data.

July 2006: Training into the research laboratory of the INSA (National Institute of Applied Sciences: a French engineering school) in Lyon.

Languages:

French :	Native
English :	Fluent
Moroccan Arabic:	Fluent
Arabic :	Intermediate level
German :	Intermediate level

Publications:

S. Benkirane, J. Hillston, C. McCaig, R. Norman and C. Shankland. “Improved Continuous Approximation of PEPA Models through Epidemiological Examples.” In proceedings of From Biology to Concurrency and back, FBTC 2008. Electronic notes in Theoretical Computer Science, Elsevier, 229(1) 59-74 2009.

S. Benkirane, C. Shankland, R. Norman and C. McCaig. “Modelling the bubonic plague in a prairie dog burrow: a work in progress.” In: 8th Workshop on Process Algebra and Stochastically Timed Activities: pp 145-152, Edinburgh, 2009.

S. Benkirane. “Modelling population fluctuations in PEPA ” In : 8th Workshop on Process Algebra and Stochastically Timed Activities, Edinburgh, 2009.

Other extra-curriculum activities:

Cryptography (and RSA in particular).
Sport (basketball), hill walking, reading.