Lorenzo Stella

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Professional Experience

2013-now | PhD student at IMT Institute for Advanced Studies Lucca (www.imtlucca.it),

Lucca (Italy).

2011–2012 Research Analyst at COSBI (www.cosbi.eu), Trento (Italy).

Analysis and simulation of stochastic models in systems biology (PK/PD, metabolic networks); inference and analysis of gene regulatory networks; development of tools for stochastic simulation and network analysis in C#, Python

and MATLAB languages.

2011 Software Developer at WorkHard (www.workhard.ph), Florence (Italy).

Multimedia software development using ActionScript3 language for the Flash/AIR platform; interaction with RFID devices; experiments with C# and

the Microsoft Kinect SDK.

Education

2008–2011 MSc in Computer Science, University of Florence, 110/110 cum laude.

Thesis supervised by Prof. Luigi Brugnano:

EFFICIENT METHODS FOR THE NUMERICAL SOLUTION OF HAMILTONIAN PROBLEMS

Analysis of the effectiveness of numerical methods for differential equations with respect to the preservation of qualitative properties of the simulated system, with particular attention to energy conservation in the case of Hamiltonian systems and to the efficient implementation of such techniques, using a framework developed *ad hoc* with the C language.

2004–2008 BSc in Computer Science, University of Florence, 110/110.

Thesis supervised by Prof. Luigi Brugnano:

NUMERICAL METHODS IN LINEAR ALGEBRA WITH APPLICATIONS TO GOOGLE'S PAGERANK

Study of the *random surfer* model and possible approaches to the calculation of the stationary point of the Markov chain associated with it, with the aim of combining modeling and mathematical aspects of the problem with those of its efficient resolution on a computer. The approaches and algorithms presented were compared on the basis of experimental results obtained with MATLAB implementations.

Publications

2013 | Marco Scotti, Lorenzo Stella, Emily J. Shearer, and Patrick J. Stover. Modeling

cellular compartmentation in one-carbon metabolism. Wiley Interdisciplinary Re-

views: Systems Biology and Medicine, 2013

Scientific and technical skills

Mathematics | Algebra, Linear Algebra, Calculus, Numerical Analysis, Probability, Geometry,

Dynamical Systems, Mathematical Logic.

Computer Science | Algorithms, Data Structures, Theoretical Computer Science and Computational

Complexity, Databases.

Programming | Excellent knowledge of C, Python, MATLAB, Java. Good skills in C++, C#,

Scheme. Familiar with Haskell, Perl, Fortran.

Operating systems | GNU/Linux. Good knowledge of Mac OS X, MS Windows.

Other tools LATEX, MySQL database management system.

Languages

Italian Native English Fluent

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