

Lorenzo Stella

Born	December 12, 1985	Email	lorenzostella@gmail.com
in	Florence, Italy	Web	lostella.github.io
Nationality	Italian, American	GitHub	github.com/lostella

Professional Experience

Feb 2013 – now	PhD student at IMT School for Advanced Studies, Lucca (Italy) www.imtlucca.it and KU Leuven, Leuven (Belgium). www.esat.kuleuven.be/stadius Nonsmooth optimization algorithms, applications to optimal control, distributed optimization, large-scale machine learning, image processing. Teaching assistant, exercises and laboratory sessions for the “Optimization” class, taught by Panos Patrinos, at KU Leuven.
2011 – 2012	Research Analyst at COSBI, Trento (Italy). www.cosbi.eu 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.

Education

2008 – 2011	M.S. in Computer Science, University of Florence. Final grade: 110/110 cum laude. Thesis supervised by Prof. Luigi Brugnano, <i>Efficient methods for the numerical solution of Hamiltonian problems</i> . Analysis of the effectiveness of numerical methods for ODEs with respect to the conservation of energy in the case of Hamiltonian systems. Efficient implementation of such techniques using a framework developed in C.
2004 – 2008	B.S. in Computer Science, University of Florence. Final grade: 110/110. Thesis supervised by Prof. Luigi Brugnano, <i>Numerical methods in Linear Algebra with applications to Google’s Pagerank</i> . Study of the <i>random surfer</i> model and possible approaches to the computation of the stationary point of the associated Markov chain. Experimental results obtained with MATLAB simulations.

Publications

(Google Scholar: scholar.google.com/citations?user=Y3ag8YsAAAAJ)

2016	A. THEMELIS, L. STELLA, AND P. PATRINOS, <i>Forward-backward envelope for the sum of two nonconvex functions: Further properties and nonmonotone line-search algorithms</i> , ArXiv preprint, (2016) L. STELLA, A. THEMELIS, AND P. PATRINOS, <i>Forward-backward quasi-Newton methods for nonsmooth optimization problems</i> , ArXiv preprint, (2016) P. LATAFAT, L. STELLA, AND P. PATRINOS, <i>New primal-dual proximal algorithms for distributed optimization</i> , Accepted to the 55th IEEE Conference on Decision and Control, Las Vegas, NV, USA, (2016)
2014	P. PATRINOS, L. STELLA, AND A. BEMPORAD, <i>Douglas-Rachford splitting: complexity estimates and accelerated variants</i> , Proceedings of the 53rd IEEE Conference on Decision and Control, Los Angeles, CA, USA, (2014) ———, <i>Forward-backward truncated Newton methods for convex composite optimization</i> , ArXiv preprint, (2014)

Software projects

Proximal Operators.jl	<p>JULIA package to compute the proximal operator of several functions commonly used in nonsmooth optimization problems. Useful as building block to implement large scale optimization algorithms such as ADMM.</p> <p>Web page: github.com/kul-forbes/ProximalOperators.jl</p>
ForBES	<p>MATLAB solver for nonsmooth optimization, contains a library of mathematical functions to formulate problems arising in control, machine learning, image and signal processing.</p> <p>Web page: kul-forbes.github.io/ForBES</p>
libForBES	<p>C++ framework for modeling and solving large-scale nonsmooth optimization problems, allows to interface many high-level languages (including R, PYTHON, JULIA) to a unique solver capable of addressing nonsmooth problems from several application fields.</p> <p>Web page: kul-forbes.github.io/libForBES</p>
libLBFGS	<p>C library providing the structures and routines to implement the limited-memory BFGS algorithm (L-BFGS) for large-scale smooth unconstrained optimization. Contains a MEX interface to MATLAB.</p> <p>Web page: github.com/lostella/libLBFGS</p>

Programming skills

Proficient	C, MATLAB, PYTHON, JULIA, JAVA, C++
Familiar	C#, HASKELL

Languages

English	Native
Italian	Native

Updated November 7, 2016