

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, *Efficient methods for the numerical solution of Hamiltonian problems*. 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, *Numerical methods in Linear Algebra with applications to Google’s Pagerank*. Study of the *random surfer* 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, *Forward-backward envelope for the sum of two nonconvex functions: Further properties and nonmonotone line-search algorithms*, ArXiv preprint, (2016)
- L. STELLA, A. THEMELIS, AND P. PATRINOS, *Forward-backward quasi-Newton methods for nonsmooth optimization problems*, ArXiv preprint, (2016)
- P. LATAFAT, L. STELLA, AND P. PATRINOS, *New primal-dual proximal algorithms for distributed optimization*, Accepted to the 55th IEEE Conference on Decision and Control, Las Vegas, NV, USA, (2016)
- 2014 | P. PATRINOS, L. STELLA, AND A. BEMPORAD, *Douglas-Rachford splitting: complexity estimates and accelerated variants*, Proceedings of the 53rd IEEE Conference on Decision and Control, Los Angeles, CA, USA, (2014)
- , *Forward-backward truncated Newton methods for convex composite optimization*, ArXiv preprint, (2014)

Talks and seminars

- Nov. 2015 | “Proximal quasi-Newton methods for nonsmooth composite optimization problems,” at the KU Leuven Optimization in Engineering Center (OPTEC), Spa, Belgium.

Jul. 2015	“Accelerated L-BFGS for large scale nonsmooth convex optimization,” at the 22 nd International Symposium on Mathematical Programming (ISMP 2015), Pittsburgh, PA, USA.
Dec. 2014	“Douglas-Rachford splitting: complexity estimates and accelerated variants,” at the 53 rd IEEE Conference on Decision and Control (CDC 2014), Los Angeles, CA, USA.

Software projects

(GitHub: github.com/lostella)

ForBES	MATLAB solver for nonsmooth optimization problems, provided with a library of mathematical functions used to model problems arising in numerous application fields such as control, machine learning, image and signal processing. Web page: kul-forbes.github.io/ForBES
libForBES	C++ framework for modeling and solving large-scale nonsmooth optimization problems, will allow to interface many high-level languages (including R, PYTHON, JULIA) to a unique solver capable of addressing nonsmooth optimization problems from several application fields. Web page: kul-forbes.github.io/libForBES
libLBFGS	C library providing the structures and routines for implementing the limited-memory BFGS algorithm (L-BFGS) for large-scale smooth unconstrained optimization. Contains a MEX interface to MATLAB. Web page: github.com/lostella/libLBFGS

Programming skills

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

Languages

English	Native
Italian	Native

Updated August 4, 2016