

Europass Curriculum Vitae

Personal information

Surname(s) / First name(s)
Email(s)
Nationality(-ies)
Gender

Benfenati, Alessandro

alessandro.benfenati@unife.it
Italy
Male

Education and training

Dates
Research Activity

1 January 2012 - today

Doctorate

Numerical optimization methods, with particular care at image restoration problems in bio-medicine, astronomy and microscopy. Participation at the project IPBioSS (High Complexity Inverse Problems in Biomedical Applications and Social Systems). Owner of a SPINNER scholarship

Institute

University of Ferrara

Dates
Title of qualification awarded

March 18th, 2011

Master degree in Mathematics, with a thesis entitled "Metodi numerici per la risoluzione di problemi di blind deconvolution in immagini astronomiche", with final grade 110/110 cum laude

Principal subjects/Occupational skills covered

studying of optimization algorithms, problem solving regarding image deblurring and image blind deconvolution, writing algorithms in MatLab language, analysis of data

Name and type of organization providing education and training

University "Alma Mater Studiorum" of Bologna, Facoltà di Scienze Matematiche, Fisiche e Naturali - Department of Maths

Dates
Title of qualification awarded

October 17th, 2008

Bachelor degree in Mathematics, with a thesis entitled "Sistemi di funzioni ortonormali in spazi di Hilbert", with final grade 108/110

Principal subjects/Occupational skills covered

studying of Hilbert function spaces, solving partial differential equations using Fourier Analysis, applying theoretical results to physical problems

Name and type of organization providing education and training

University "Alma Mater Studiorum" of Bologna, Facoltà di Scienze Matematiche, Fisiche e Naturali - Department of Maths

Dates
Title of qualification awarded

July 2005

High School diploma with a final score of 98/100

Principal subjects/Occupational skills covered

general knowledge of Italian and English culture, Mathematics, Physics, written and spoken English, Arts, IT

Name and type of organization providing education and training

Scientific high school "Leonardo da Vinci"

Teaching experience

Dates
Institution
Activity

28 September 2012 - 23 December 2012

University of Ferrara

Teaching support for the course "Numerical Calculus and Laboratory"; laboratory assistant

Dates

25 February 2013 - 7 May 2013

Institution	University of Ferrara
Activity	Teaching support for the course "Numerical Analysis"; laboratory assistant
Dates	07 April 2014 - 31 July 2014
Institution	University of Ferrara
Activity	Teaching support for the course "Geometry and Linear Algebra in MatLab"; laboratory assistant

Publications

A. Benfenati, V. Ruggiero, *Inexact Bregman iteration with an application to Poisson data reconstruction*, Inverse Problems 29(6)

A. Benfenati, V. Ruggiero, *Inexact Bregman iteration for deconvolution of superimposed extended and point sources*, submitted

A. Benfenati, V. Coscia, *Nonlinear microscale interactions in the kinetic theory of active particles*, Applied Mathematical Letters

A. Benfenati, V. Coscia, *Modeling Opinion Formation in the Kinetic Theory of active particles I: Spontaneous trend*, Annali dell'università di Ferrara

Attended Schools and Workshops

Date	26 June 2013 - 28 June 2013
Workshop	11th EUROPT Workshop on Advances in Continuous Optimization
Principal subjects/Occupational skills covered	Auditor to the conferences; presentation of a 20 minute talk entitled "Inexact Bregman Iteration with applications to Poisson data reconstruction"
Institute	Università degli Studi di Firenze, (FI)
Date	24 June 2013
Doctoral School	Knowledge Discovery in Life Sciences
Principal subjects/Occupational skills covered	Auditor
Institute	University of Ferrara, (FE)
Date	17 June 2013 - 23 June 2013
Workshop	Numerical Computations: Theory and Algorithms
Principal subjects/Occupational skills covered	Auditor to the conferences; presentation of a 20 minute talk entitled "Image Restoration from Poisson Data by an Inexact Bregman Iteration Scheme"
Institute	University of Calabria, Lobachevsky State University
Date	22 May 2013
Conference	New Computational Methods for Inverse Problems
Principal subjects/Occupational skills covered	Auditor to the conferences
Institute	Ecole Normale supérieure de Cachan, Paris
Date	31 January 2013 - 1 February 2013
Workshop	GA-MeMoMa-COMPLEX-SIMAI - Incontro plenario
Principal subjects/Occupational skills covered	Auditor to the conferences; presentation of a 25 minute talk entitled "Su un modello di formazione di opinioni: Considerazioni generali e primi risultati"
Institute	Politecnico di Torino, (TO)
Date	15 January 2013 - 16 January 2013
Workshop	Metodi matematici nel trattamento delle immagini
Principal subjects/Occupational skills covered	Auditor to the conferences

Institute	Università di Roma La Sapienza, (ROMA)
Date	20 September 2012 - 21 September 2012
Workshop	Optimization Techniques for Inverse Problems II
Principal subjects/Occupational skills covered	Auditor to the conferences; presentation of a poster entitled <i>Image Restoration from Poisson data by Bregman Iteration</i> .
Institute	Università degli studi di Modena e Reggio Emilia, (MO)
Date	2 July 2012 - 23 July 2012
Doctoral School	21st Summer school of Parallel Computing
Principal subjects/Occupational skills covered	HPC architectures, Parallelization techniques; MPI and MPI2. Introduction to some scalable numerical libraries: SCALAPACK, FFT, PETSc, OpenMP. Introduction to hybrid programming: MPI+OpenMP. Code optimization, Optimization flags for Linux and IBM compilers, Tools for profiling, Tools for debugging
Institute	CINECA, Casalecchio di Reno (BO)
Date	23 April 2012 - 27 April 2012
Workshop	Computational Inverse Problems
Activity	Auditor to the conferences; presentation of a 25 minute talk entitled "Image restoration of Poisson data with iterative Bregman regularization procedure"
Institute	Erwin Schroedinger Institut, Vienna
Date	12 March 2012 - 16 March 2012
Doctoral School	Numerical Methods for Sparse Recovery
Principal subjects/Occupational skills covered	Analysis of numerical methods for optimization methods with linear constraints, with sparsity conditions on solution
Institute	Dipartimento di Matematica dell'Università degli Studi di Milano (MI)

Abroad Period

Date	9 may 2013- 13 may 2013; 15 September 2013 - 20 december 2013
Research Activity	Study of the steplength selection for subgradients methods; study of convex analysis; numerical implementation of subgradients methods.
Supervisor	Antonin Chambolle
Institute	CMAP, Ecole Polytechnique, Paris

Personal skills and competences

Mother tongue(s)

Other language(s)

*Self-assessment
European level^(*)*

Italian
English

Italian

English - TOEFL score: 94/120

Understanding		Speaking		Writing
Listening	Reading	Spoken interaction	Spoken production	
C1	C1	C1	C1	C1
B2	B2	B2	B2	B2

^(*) Common European Framework of Reference (CEF) level

Computer skills and competences

Operative Systems Used: Windows 98, Windows 7, Windows Vista Linux

Programming Languages: Java, C, C++, HTML, MatLab, R

Documents writing: Microsoft Office, LibreOffice, L^AT_EX

Driving licence(s)

European Driver Licence A (motorcycles), European Driver Licence B (cars)