Nevio Dubbini - Ph.D.

Curriculum Vitae

Personal information

Name/Surname	Nevio Dubbini
Birthday	
Affiliations	
Telephone	
E-mail	
Web page	

University

Career

Giugno 2012 - Maggio 2013	**Post-doc researcher**, *Mathematics Department "L. Tonelli", University of Pisa.*
Main subjects	Mathematical models and algorithms for the deteremination of the archaeological potential, archaeological potential of a urban area, page rank models, shape theory.
May 2010 - May 2012	**Post-doc researcher**, *Laboratory of Clinical Biochemistry and Molecular Biology, faculty of Medicine, University of Pisa.*
Main subjects	fMRI data analysis, brain activations, brain connectivity, modeling of brain behaviors, dynamical systems.
January-September 2009	**Fellowship**, *Interdepartmental center "E. Piaggio", faculty of Engineering, University of Pisa.*
Main subjects	Left invertibility of output-quantized control systems, iterated function systems, finite inputs.
January 2006 - June 2010	**PhD in Mathematics**, *Mathematics department "L. Tonelli", University of Pisa.*
Main subjects	Title: Left invertibility of I/O quantized systems - IFS, number theory, cryptography, algorithms. Supervisors: Prof. Antonio Bicchi, Prof. Benedetto Piccoli. Keywords: left invertibility, quantized control systems, cryptography, number theory, Mahler measure, Iterated Function System theory, finite inputs.
February 2005	**Laurea Degree in Mathematics, 110 cum laude**, *University of Pisa.*
Main subjects	Title: Dynamical systems and computable information. Supervisor: Prof. Vieri Benci. Keywords: Kolmogorov-Sinai entropy, Shannon entropy, compression algorithms, symbolic dynamics

Experience

September 2011	**Session chair**, *18-th IFAC World Congress - International Federatcion of Automatic Control*, Milan, Italy.
February 2011	**Seminarial activity**, *Scuola Normale Superiore, Pisa*, two lectures in "Dynamics and time series: theory and applications" (prof. Stefano Marmi).
November–December 2010	**Teaching**, *University of Pisa*, Mathematics, laurea degree in Agriculture. under the supervision of professor Giuseppe Puglisi.
November–December 2009	**Teaching**, *University of Pisa*, Mathematics, laurea degree in Agriculture. under the supervision of professor Giuseppe Puglisi.
February-May 2008	**Teaching**, *University of Pisa*, Mathematics and Informatics, laurea degree in Agriculture. under the supervision of professor Giuseppe Puglisi.
October–December 2007	**Teaching**, *University of Pisa*, Mathematical Analysis, laurea degree in Informatics. under the supervision of professor Mauro Sassetti.
February-May 2007	**Teaching**, *University of Pisa*, Mathematics and Informatics, laurea degree in Agriculture. under the supervision of professor Giuseppe Puglisi.
October–December 2006	**Teaching**, *University of Pisa*, Mathematical Analysis, laurea degree in Informatics,. under the supervision of professor Mauro Sassetti.

Journal reviewer for Nonlinear Analysis: Hybrid Systems (NAHS).

Conference reviewer for the American Control Conference (ACC 2012), held in Montreal, Canada.

Conference reviewer for the IFAC Symposium on Robust Control Design (RoConD 2012), held in Aalborg, Denmark.

Conference reviewer for the Conference on Decision and Control (CDC 2009), held in Shangai, China.

Conference reviewer for 47-th Conference on Decision and Control (CDC 2008), held in Cancun, Mexico.

Conference reviewer for the 17-th IFAC Wolrd Congress (2008), held in Seoul, Korea.

Extras

November 2010	**ADI - Italian Association of Ph.D. students and early stage researchers**, *News conference about Ph.D. in Italy*, Room Nassirya, Senato della Repubblica, Rome, Italy.
September 2009–today	**ADI - Italian Association of Ph.D. students and early stage researchers**, *National secretary member*.
May 2009	**ADI - Italian Association of Ph.D. students and early stage researchers**, *Organization of seminars about IDEAS European Research Council starting grants*, University of Pisa.
May 2009	**ADI - Italian Association of Ph.D. students and early stage researchers**, *Organization of seminars about IDEAS European Research Council starting grants*, University of Naples "Federico II".
May 2009	**Music**, *Recording of the cd "In Rima"*, 12 songs I authored (in Italian). 2 songs available at http://www.myspace.com/neviodubbini
November 2008	**ADI - Italian Association of Ph.D. students and early stage researchers**, *Organization of a question time about Ph.D.*, with Walter Tocci (italian Parliament), Alessandro Cugini (Confidustria).
September 1999	**Music**, certification of solfeggio, academy of music (Foggia, Italy).

Skills

Languages	**Italian, English**.
Programs	**Matlab**, high-level technical computing language and interactive environment for algorithm development, data visualization, data analysis, and numeric computation.
Programs	**AFNI**, Analysis of Functional NeuroImages: it is a set of C programs for processing, analyzing, and displaying functional MRI data - a technique for mapping human brain activity.
Programs	**Latex**, Document markup language and document preparation system for the TeX typesetting program.

Scientific publications

Journals

Fagiolini A., <u>Dubbini N.</u>, Martini S., Bicchi A., *Distributed consensus on set-valued information*, IEEE Transactions on Automatic Control, note: submitted, (2010).

<u>Dubbini N.</u>, Monge M., *An equivalent of Kronecker's theorem for powers of an tlgebraic number and structure of linear recurrences of fixed length*, Acta Arithmetica, note: accepted for publication, (2010).

<u>Dubbini N.</u>, Piccoli B., Bicchi A., *Left invertibility of discrete systems with finite inputs and quantized output*, International Journal of Control, 83(4), pages: 798–809, (2010).

<u>Dubbini N.</u>, Piccoli B., Bicchi A., *Left invertibility of discrete–time I/O quantized linear systems*, Mathematics of Control Signals and Systems, 23(1), pages: 117–139, (2011).

Conference proceedings

<u>Dubbini N.</u>, Monge M., Bicchi A., *Left invertibilitty of output-quantized MISO linear systems*, proceedings of the 18-th IFAC World Congress, pages:11278-11283, (2011).

<u>Dubbini N.</u>, Carluccio A., Bicchi A., *Left invertibility of output-quantized systems: an application to cryptography*, proceedings of the 49-th IEEE Conference on Decision and Control, pags: 4078-4083, (2010).

Fagiolini A., Martini S., <u>Dubbini N.</u>, Bicchi A., *Distributed consensus on boolean information*, 1st IFAC Workshop on Estimation and Control of Networked Systems, Venice, Italy, (2009).

<u>Dubbini N.</u>, Piccoli B., Bicchi A., *Left invertibility of discrete systems with finite inputs and quantized output*, Proceedings of the 47–th IEEE Conference on Decision and Control, pages: 4687–4692, (2008).

<u>Dubbini N.</u>, Ricciardi E., Gaglianese A., Marmi S., Pietrini P., *Causality as a unifying approach between activation and connectivity analysis of fMRI data*, 17-th annual meeting of the Organization for Human Brain Mapping, note: abstract, (2011).

Libri o parti di libro

Bini D., <u>Dubbini N.</u>, Steffè S., *On the two main issues about the application of page rank for the determination of archaeological potential*, english version in MapPapers 2en-II pp.45-50, versione italiana in MapPapers 2-II pp.39-44, (2012).

Anichini F., Bini D., Bini M., <u>Dubbini N.</u>, Fabiani F., Gattiglia G., Giacomelli S., Gualandi M.L., Pappalardo M., Paribeni E., Sarti G., Steffè S., *MAPPA Project. Methodologies Applied to Archaeological Potential Predictivity*, english version in MapPapers 1en-I pp.23-43, versione italiana in MapPapers 1-I pp.1-22, (2011).

Anichini F., Bini D., Bini M., <u>Dubbini N.</u>, Fabiani F., Gattiglia G., Giacomelli S., Gualandi M.L., Pappalardo M., Rossi V., Sarti G., Steffè S., *Acquisition of archaeological, geomorphological and stratigraphic data for the urban and peri-urban area of Pisa and preliminary analysis*, english version in MapPapers 3en-I pp.59-67, versione italiana in MapPapers 3-I pp.50-58, (2011).

Bini D., <u>Dubbini N.</u>, Steffè S., *Mathematical models for the determination of archaeological potential*, english version in MapPapers 4en-I pp.77-85, versione italiana MapPapers 4-I pp.68-76, (2011).

Workshops and Conferences

March 2012 **CAA 2012 - Computer Applications and Quantitative Methods in Archaeology**, *Southampton, England.*

September 2011 **18-th IFAC World Congress**, *Milan, Italy.*

June 2011 **HBM 2011 - Organization for Human Brain Mapping**, *Quebec City, Quebec, Canada.*

January 2011 **HYCON–EECI graduate school on control**, *Paris, France*, "Controlled synchronization of dynamical systems", Antonio Loria and Elena Panteley.

December 2010 **49-th IEEE Conference on Decision and Control**, *Atlanta, USA.*

September 2010 **SIDRA 2010, annual conference of the Italian Society of Professors and Researchers in Automation**, *L'Aquila, Italy.*

June 2010 **SIS 2010, 45-th scientific meeting of the Italian Statistical Society**, *Padua, Italy.*

June 2010 **5-th fMRI Analysis Workshop with AFNI and SUMA**, *Pisa, Italy.*

June 2009 **Mathematical Foundations of Complex Networked Information Systems**, *Verres, Italy.*

December 2008 **47th IEEE Conference on Decision and Control**, *Cancun, Mexico.*

October 2008 **EECI-ICO meeting**, *Pisa, Italy.*

July 2008 **CIRA school for Ph.D. students**, *Bertinoro, Italy*, "Nonlinear control systems".

March 2008 **HYCON–EECI graduate school on control**, *Paris, France*, "Networked systems and control", Richard Murray.

July 2007 **CIRA school for Ph.D. students**, *Bertinoro, Italy*, "Identification of nonlinear systems".

March 2007 **HYCON–EECI graduate school on control**, *Paris, France*, "Switched systems and control', Daniel Liberzon.

July 2006 **CIRA school for Ph.D. students**, *Bertinoro, Italy*, "Positive systems".

March 2006 **In.Ve.N.T.I. Intraprendere Verso Nuovi Traguardi Imprenditoriali**, *Camera di Commercio, Pisa, Italy*, Entrepreneurship course.

February 2006 **Mathematical aspects of high performance codes: state of the art and open problems**, *Centro di Ricerca Matematica Ennio De Giorgi, Scuola Normale Superiore, Pisa, Italy*, Andrea Montanari, Tom Richardson, Pascal Vontobel.