



TO MAGNIFICO RETTORE OF UNIVERSITA' DEGLI STUDI DI MILANO

ID CODE: 4718

I the undersigned asks to participate in the public selection, for qualifications and examinations, for the awarding of a type B fellowship at Dipartimento di Economia, Management e Metodi Quantitativi (Università degli Studi di Milano).

Scientist - in - charge: Prof. Giancarlo Manzi.

Danilo Aringhieri

## CURRICULUM VITAE

### PERSONAL INFORMATION

Surname	Aringhieri
Name	Danilo
Date of birth	15 / 04 / 1975

### PRESENT OCCUPATION

Appointment	Structure
Unoccupied	None

### EDUCATION AND TRAINING

Degree	Course of studies	University	year of achievement of the degree
Degree	Physics (ante D.M. n° 509/1999)	University of Eastern Piedmont 'A. Avogadro'-DiSIT	2010, April
Specialization			
PhD	Industrial Engineering-Statistical Economics	University of Parma	2019, April
Master	Material Sciences for Energy Efficiency and Environmental Sustainability (MATER)	University of Eastern Piedmont-Università of Turin-Consorzio UNIVER in Vercelli	2012, February
Degree of medical specialization			



Degree of specialization	European			
Other		2° week of the XX° Summer School on Statistical Inference in Biology and Human Sciences BIostat 2013	Multi-disciplinary Center of Advanced Studies in Statistics at the University Campus "Asti Studi Superiori"	2013
Other		Summer School on Mathematics for Economics & Social Sciences in San Miniato, "The Evolution of Games & Social Contacts: Preferences, Norms and Interactions"	Centro di Ricerca Matematica (CRM) "Ennio De Giorgi", in partnership with Scuola Normale Superiore and "Sant'Anna" School of Advanced Studies in Pisa	2014
Other		Introductory School on "Disordered Systems, Random Spatial Processes & Some Applications"	Centre International de Rencontres Mathématiques (CIRM), University of Aix-en-Provence and Marseilles (Luminy Campus)	2015
Other		Summer School on Mathematics for Economics and Social Sciences in San Miniato, "Financial Economics 2.0: bubbles, instability, speculation"	Centro di Ricerca Matematica (CRM) "Ennio De Giorgi", in partnership with Scuola Normale Superiore and "Sant'Anna" School of Advanced Studies in Pisa	2015
Other		PIMS Summer School in Mathematical Finance on "Informational & Imperfect Financial Markets", "Market Microstructure & Algorithmic Trading"	Pacific Institute for Mathematical Sciences and University of Alberta (Campus of Mathematical, Physical, Natural Sciences in Edmonton, Canada)	2016
Other		Summer School on Mathematics for Economics & Social Sciences in San Miniato, "Mathematical Methods for Time Series Analysis"	Centro di Ricerca Matematica (CRM) "Ennio De Giorgi", in partnership with Scuola Normale Superiore and "Sant'Anna" School of Advanced Studies in Pisa	2018





Other	Online tri-modular course on "Occupational Healthcare and Safety": Mod.1: General Education; Mod.2: Low Risk; Mod.3: Middle Risk	Produced by University of Modena and Reggio Emilia, adopted by University of Parma	2016
Other	Work Placement Tools-Professional English "We can, We go" (18 hours)	University "Amedeo Avogadro" (UPO)	2012
Other	Individual course on 'General English'-CEFR: B2 level (20 hours)	British Institutes Group in Alessandria	2010
Other	Course on the Start-up Entrepreneurship (20 hours)	ASFI (Azienda Speciale per la Formazione alle Imprese), Chamber of Commerce in Alessandria	2012

## REGISTRATION IN PROFESSIONAL ASSOCIATIONS

Date of registration	Association	City
	None	

## FOREIGN LANGUAGES

Languages	level of knowledge
English	B2
French	A1

## AWARDS, ACKNOWLEDGEMENTS, SCHOLARSHIPS

Year	Description of award
Apr. 2012-Oct. 2013	18-month research fellowship funded by the Italian PRIN-2009 "The growth of firms and countries: distributional properties and economic determinants"
Jan. 2014-Dec. 2017	'Fondazione CariParma' Doctoral scholarship (1-year suspension)



## TRAINING OR RESEARCH ACTIVITY

Master-of Science thesis at intersection of Econophysics and Financial Mathematics, concerning vanilla-options pricing involving the jump-diffusion process and points processes. Title: "Valutazione di un'opzione call europea scritta su processi a salti" (mentor: Prof. Luciano Ramello; co-supervisor: Prof. Enrico Scalas). The M.Sc. thesis is presented together with the Master-of-Science, the 1<sup>st</sup>-level post-degree master and the Ph.D. Certificates.

From September 2011 to January 2012: master-stage final report on the activity of the INRIM group involved in the study of superconductive transitions in  $\text{MgB}_2$  nanogranular thin film, analysed via current noise measures, near the critical temperature, for weak bias currents.

From January 2015 until March 2016: member of the examination board of the Prof. Ganugi course on 'Data Analysis' (6 ECTS credits), 2nd-level degree in Management Engineering, Dept. of Engineering and Architecture, Univ. of Parma (examined approximately 120 undergraduate students).

## PROJECT ACTIVITY

Year	Project
2012, April-2013, October	Research fellow (FIS/01 Experimental Physics) on " <i>Finitary and non-finitary probabilistic methods in Economics</i> " (scientific referee: Prof. Enrico Scalas), at the DiSIT of Univ. of Eastern Piedmont "A. Avogadro" (funded by the PRIN-2009 "The growth of firms and countries: distributional properties and economic determinants"). The aim was the study of possible applications in Economics of finite Markov chains and continuous time random walks, both in the statistical-empirical perspective and respect to probability theory. Specifically, simulation points were produced, via the Parsimonious option-pricing Model by Scalas and Politi implemented into Mathematica, and different volatility-smile curves were derived for different values of some free parameters of the model; diagrams and tri-dimensional graphs were produced by Matlab. A detailed demonstration was given that the Fractional Poisson Process is super-poissonian. A note on the double Laplace transform of the non-stationary probability density function of the residual lifetime of a renewal process was drawn up. <i>The scientific referee did not use this material for any publication, even if it was not judged incorrect.</i>
2014, January-2019, April	Doctoral project on " <i>Statistical Distributions and Markov Chains for the Analysis of Firms respect to official and administrative databases</i> " (tutor: Prof. Piero Ganugi-Statistical Economics, 13/D2, SECS-S/03). Classical inference, chi-squared-type fit tests and nine transition-matrix-based mobility indices for discrete-time Markov chains (both for the stationary and for the not-stationary case; for the 1 <sup>st</sup> and the 2 <sup>nd</sup> order) were applied to statistical distributions and migration probabilities from AIDA-InfoCamere sample microdata of some Italian industries. Related data analyses, by means of Matlab dedicated programmes, were executed. Results can be found in the scientific paper by Aringhieri and Ferretti, as well as in the doctoral thesis by Aringhieri.

## PATENTS

Patent
None





## CONGRESSES AND SEMINARS

Date	Title	Place

## PUBLICATIONS

Books
Doctoral thesis: "An interactive MATLAB device for chi-squared tests about Markov Chains and estimating nine transition-matrix-based mobility indices: evidences from AIDA microdata of some Italian industries" (fully in English). Tutor: Prof. Piero Ganugi; Ph.D. co-ordinator: Prof. Gianni Royer Carfagni. External reviewers: Prof. Luigi Grossi and Dott.sa Lisa Crosato. Recorded at the end of April 2019 inside the Italian electronic archive named 'DSpace', identified by the browsing code: <a href="http://dspace-unipr.cineca.it/handle/1889/3839">http://dspace-unipr.cineca.it/handle/1889/3839</a> .

Articles in reviews
D. Aringhieri, C. Ferretti "An interactive MATLAB tool for the estimation of the Directional Mobility Index compared to some other mobility measures" (in English), <i>Statistica &amp; Applicazioni - Statistics &amp; Applications</i> , Vol. XVI, n. 1, 2018, pp. 81-116 edited by 'Vita e Pensiero'.

Congress proceedings

## OTHER INFORMATION

Very good user of the Windows O.S. and the best-known web browsers
Good, independent user of Microsoft Office, Libre Office and Open Office, more specifically of Word, Excel, PowerPoint and Microsoft Equation Editor
Proficient user of the MatLab environment. User of Linux O.S., "Mathematica" and "R"
Good user of the old versions of the software Origin.

Declarations given in the present curriculum must be considered released according to art. 46 and 47 of DPR n. 445/2000.

The present curriculum does not contain confidential and legal information according to art. 4, paragraph 1, points d) and e) of D.Lgs. 30.06.2003 n. 196.

Place and date: Alessandria, 21/09/2020

SIGNATURE

*Aringhieri Danilo*