

MAURO FACCIN

Curriculum Vitæ

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<https://maurofaccin.github.io>

ACTUAL POSITION

- **BigData Group and ICTEAM Institute at U.C. Louvain**
Interests/Research line
 - Dynamics on and of complex networks
 - Mutual influence of topology and kinetics
 - Markovian and non-Markovian dynamics
 - Community and block detection

PROFESSIONAL EXPERIENCE

2015 - today	PostDoc Université Catholique de Louvain (ICTEAM)	Louvain la Neuve, Belgium
2011 - 2015	PostDoc ISI Foundation	Torino, Italy
2006 - 2011	PhD Bifi Institute	Zaragoza, Spain

FELLOWSHIPS

2015 MOVE-IN Louvain Fellowship (with support of Marie Curie Actions)

MEMBERSHIP

2015 - today	Network Science Society Member
2014 - today	Complex Systems Society Member
2013 - today	Frontiers in Quantum Computing Review Editor

COMMITTEES

2 Jun 2014	Quantum Frontiers for Network Science Organizing committee	NetSci 2014, Berkeley, California
21 Sep 2016	Coarse-graining of Complex Systems Organizing committee	CCS2016, Amsterdam, Netherlands
30 Nov 2016	Complex Networks 2016 Program committee	Milan, Italy
15 Dec 2016	BeNet 2016 Organizing committee	Louvain-la-Neuve, Belgium
29 Nov 2017	Complex Networks 2017 Program Committee	Lyon, France
11 Dec 2018	Complex Networks 2018 Program Committee	Cambridge, UK

REVIEWER

- Applied Network Science
- Journal of Complex Networks
- Journal of Statistical Mechanics
- Natural Computing
- APS (Physical Review E)
- Scientific Reports

TEACHING

2015-2018	LINMA2111 Algorithms and Complexity Université Catholique de Louvain	Assistant Professor
2005	Physics and Math at primary school NEST	Hetauda, Nepal
2004	guide in Science Museum Organizer: INFN	Padova, Italy

EDUCATION

2011	PhD in Physics supervisor: Pierpaolo Bruscolini	University of Zaragoza
2007	Master in Physics and Technology supervisor: Pierpaolo Bruscolini	University of Zaragoza
2005	MSc in Physics supervisor: Enzo Orlandini	University of Padova

PUBLICATIONS

- **Outbreak of multidrug-resistant tuberculosis in South Africa undetected by WHO-endorsed commercial tests: an observational study**
The Lancet Infectious Diseases 2018
Makhado, Matabane, Faccin, Pinçon, Jouet, Boutachkout, Goeminne, Gaudin, Maphalala, Beckert, Niemann, Delvenne, Delmée, Razwiedani, Nchabeleng, Supply, de Jong, André
- **Entrograms and coarse graining of dynamics on complex networks**
Journal of Complex Networks
M. Faccin, M.T. Schaub, J-C. Delvenne
- **Complex Networks: from Classical to Quantum – preprint**
arXiv:1702.08459
J. Biamonte, M. Faccin, M. De Domenico
- **Chiral Quantum Walks**
Phys. Rev. A 93, 042302
D. L. Lu, J. D. Biamonte, J. Li, H. Li, T. H. Johnson, V. Bergholm, M. Faccin, Z. Zimborás, R. Laflamme, J. Baugh, and S. Lloyd
- **Mapping the topography of a protein energy landscape**
J. Am. Chem. Soc., 2015, 137 (46), pp 14610–14625
R. D. Hutton, J. Wilkinson, M. Faccin, E. M. Sivertsson, A. Pelizzola, A. R. Lowe, P. Bruscolini, L. S. Itzhaki
- **Community Detection in Quantum Complex Networks**
Phys. Rev. X 4 (4 2014), p. 041012
M. Faccin, P. Migdał, T. H. Johnson, V. Bergholm, and J. D. Biamonte
- **Degree Distribution in Quantum Walks on Complex Networks**
Phys. Rev. X 3 (4 2013), p. 041007
M. Faccin, T. Johnson, J. Biamonte, S. Kais, and P. Migdał
- **Quantum Transport Enhancement by Time-Reversal Symmetry Breaking**
Sci. Rep. 3 (2013). Ed. by NPG, p. 2361
Z. Zimboras, M. Faccin, Z. Kadar, J. Whitfield, B. Lanyon, and J. Biamonte
- **MS/MS Spectra Interpretation as a Statistical-Mechanics Problem**
Analytical Chemistry 85.10 (2013), pp. 4884–4892
M. Faccin and P. Bruscolini

- **Ground-state spin logic** Europhysics Letters 99.5 (2012), p. 57004
J. D. Whitfield, M. Faccin, and J. D. Biamonte
- **Analysis of the equilibrium and kinetics of the ankyrin repeat protein myotrophin**
The Journal of Chemical Physics 134.7, 075102 (2011), p. 075102
M. Faccin, P. Bruscolini, and A. Pelizzola

CONFERENCES (ORAL CONTRIBUTIONS)

23-28 Sept. 2018	A dynamical approach to block structure analysis CCS 2018	Thessaloniki, Greece
11-15 Jun 2018	Dynamical Markov Modules Netsci 2018	Paris, France
21-24 Mar 2017	Community detection in networks with non-Markovian dynamics CompleNet 2017	Dubrovnik, Croatia
30 Nov-2 Dec 2016	Behind Communities: Dynamics Define Modules ComplexNetworks 2016	Milan, Italy
19-22 Sep 2016	Beyond Communities: Dynamical Markov Modules CCS 2016	Amsterdam, Netherlands
May 30-June 3 2016	Mesoscopic Structure And Diffusion Process Memory NetSci 2016	Seoul, Korea
10-15 Jan 2015	Mesoscopic Structures and Diffusion Process Memory NetSci-X 2016	Wrocław, Poland
2-6 Jun 2015	Structural controllability of EEG temporal causal networks NetSci 2015	Zaragoza, Spain
22-26 Sep 2014	Quantum Approaches to Community Detection ECCS 2014	Lucca, Italy
12-14 Mar 2014	Community detection on quantum systems CompleNet 2014	Bologna, Italy
22-24 Jan 2014	Community Detection on Quantum Systems BIFI2014	Zaragoza, Spain
24-26 May 2013	Degree distribution in quantum complex networks IQC workshop on quantum computation and complex networks	Waterloo, Canada
6-8 Nov 2012	Ground state spin logic Tensor Network States and Algebraic Geometry Workshop	Torino, Italy
2-4 Feb 2011	Equilibrium and kinetics of the ankyrin repeat protein Myotrophin through a simple statistical mechanical model V BIFI National Conference	Zaragoza, Spain
5-7 Feb 2009	Bayesian Characterization of Protein Tandem Mass Spectra IV BIFI National Conference	Zaragoza, Spain
8-9 May 2008	Noise description in MSMS mass spectrometry, looking for a de novo sequencing algorithm VI Jornadas Aragonesas de Estabilidad y Plegamiento de Proteínas	San Sebastian, Spain

CONFERENCES (POSTER CONTRIBUTIONS)

23-25 Mar 2016	Memory and Mesoscopic Structures in Diffusion Processes CompleNet 2016	Dijon, France
7-10 Jul 2010	Folding Pathways Characterization for Ankyrin Repeat Protein Myotrophin IV Spanish Portuguese Biophysical Congress	Zaragoza, Spain
2-6 Jun 2008	Statistical characterization of fragment ions in MSMS mass spectrometry XXI Sitges Conference on Statistical Mechanics: Statistical Mechanics of Molecular Biophysics	Sitges, Spain

COMPUTER SKILLS

Coding	Python, C, C++, Matlab, Fortran
Shell	Bash, iPython/Jupyter
Versioning	GIT, Subversion, Mercurial

Plotting	Gnuplot, Matplotlib, PGFPlots(latex)
Typesetting	Latex, LibreOffice, MSOffice, Markdown
Imaging	Gimp (Raster), Inkscape (Vectorial), Rawtherapee (RAW)
Web	HTML5, CSS/SCSS, static site generators, Wordpress

LANGUAGES

Italian	Mother tongue
English	Fluent
Spanish	Fluent
French	Fair

Mauro Faccin