Mauro Faccin
Curriculum Vitæ

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Belgium
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https://maurofaccin.github.io

Actual Position

- **BigData Group and ICTEAM Institute at U.C. Louvain**
  Interests/Research line
  - Dynamical systems evolving on complex networks
  - Markovian and non-Markovian dynamics
  - Mesoscopic scale structures and their influence on the dynamical system
  - Applied data analysis for disease control
- **ARC2S at Unito**
  visitor

Professional Experience

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

Fellowships and Projects

2017 - today	**Innoviris Iris-TB (D1.31402.007-F)**
2015 - 2017	**MOVE-IN Louvain Fellowship (with support of Marie Curie Actions)**

Membership

2018 - today	**SICC - Italian Society for Chaos and Complexity**
2015 - today	**Network Science Society** Member
2014 - today	**Complex Systems Society** Member
2013 - today	**Frontiers in Quantum Computing** Review Editor

Committees

1 Dec 2020	**Complex Networks 2020** Program Committee	Madrid, Spain
10 Dec 2019	**Complex Networks 2019** Program Committee	Lisbon, Portugal
22 Feb 2019	**BeNet 2019** Program committee	Hasselt, Belgium
11 Dec 2018	**Complex Networks 2018** Program Committee	Cambridge, UK
29 Nov 2017	**Complex Networks 2017** Program Committee	Lyon, France
15 Dec 2016	**BeNet 2016** Organizing committee	Louvain-la-Neuve, Belgium

30 Nov 2016	**Complex Networks 2016**	Milan, Italy
	Program committee	
21 Sep 2016	**Coarse-graining of Complex Systems**	CCS2016, Amsterdam, Netherlands
	Organizing committee	
2 Jun 2014	**Quantum Frontiers for Network Science**	NetSci 2014, Berkeley, California
	Organizing committee	

REVIEWER

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

TEACHING

2015-2020	**LINMA2111 Algorithms and Complexity**	Assistant Professor
	Université Catholique de Louvain	
2005	**Physics and Math at primary school**	Hetauda, Nepal
	NEST	
2004	**guide in Science Museum**	Padova, Italy
	Organizer: INFN	

EDUCATION

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

PUBLICATIONS

- State aggregations in Markov chains and block models of networks   ArXiv
  M. Faccin, M.T. Schaub and j.-C. Delvenne
- Complex Networks from Classical to Quantum   Communications Physics 2-53 (2019)
  J. Biamonte, M. Faccin, M. De Domenico
- 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, Boutachkourt, 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
- 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)

20-24 Oct 2020	Data-driven TB active-case finding in South Kivu (DRC) The Union 2020	Paris, France (online)
10-12 Dec 2019	Auto-information in non-Markovian diffusion systems Complex Networks 2019	Lisbon, Portugal
22 Feb. 2019	Variable aggregation for dynamical systems on networks Benet 2019	Hasselt, Belgium
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 statiscical 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** San Sebastian, Spain |

VI Jornadas Aragonesas de Estabilidad y Plegamiento de Proteínas

Conferences (Poster Contributions)

| 17-25 Sept 2020 | State aggregation in non-Markovian systems by auto-information maximization Rome, Italy |

Netsci 2020

| 17-25 Sept 2020 | The variability of network structures inferred from time series data   Rome, Italy |

Netsci 2020

| 10-12 Dec 2019 | The variability of network structures inferred from time series data Lisbon, Portugal |

Complex Networks 2019

| 1-3 July 2019 | **Variable aggregation on (broadcasting) networks**   Trento, Italy |

CCS/Italy 2019

| 23-25 Mar 2016 | **Memory and Mesoscopic Structures in Diffusion Processes**   Dijon, France |

Complenet 2016

| 7-10 Jul 2010 | **Folding Pathways Characterization for Ankyrin Repeat Protein Myotrophin** Zaragoza, Spain |

IV Spanish Portuguese Biophysical Congress

| 2-6 Jun 2008 | **Statistical characterization of fragment ions in MSMS mass spectrometry** Sitges, Spain |

XXI Sitges Conference on Statistical Mechanics: Statistical Mechanics of Molecular Biophysics

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**

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