

MAURO FACCIN

Curriculum Vitæ

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4, Avenue Georges Lemaître
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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
 - 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

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

COMMITTEES

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

REVIEWER

- Applied Network Science
- Advances in Complex Systems
- Science Advances
- PLOS ONE
- 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)

- | | | |
|--------------------|--|------------------------|
| 22 Feb. 2019 | Variable aggregation for dynamical systems on networks | Hasselt, Belgium |
| | Benet 2019 | |
| 23-28 Sept. 2018 | A dynamical approach to block structure analysis | Thessaloniki, Greece |
| | CCS 2018 | |
| 11-15 Jun 2018 | Dynamical Markov Modules | Paris, France |
| | Netsci 2018 | |
| 21-24 Mar 2017 | Community detection in networks with non-Markovian dynamics | Dubrovnik, Croatia |
| | CompleNet 2017 | |
| 30 Nov-2 Dec 2016 | Behind Communities: Dynamics Define Modules | Milan, Italy |
| | ComplexNetworks 2016 | |
| 19-22 Sep 2016 | Beyond Communities: Dynamical Markov Modules | Amsterdam, Netherlands |
| | CCS 2016 | |
| May 30-June 3 2016 | Mesoscopic Structure And Diffusion Process Memory | Seoul, Korea |
| | NetSci 2016 | |
| 10-15 Jan 2015 | Mesoscopic Structures and Diffusion Process Memory | Wrocław, Poland |
| | NetSci-X 2016 | |
| 2-6 Jun 2015 | Structural controllability of EEG temporal causal networks | Zaragoza, Spain |
| | NetSci 2015 | |
| 22-26 Sep 2014 | Quantum Approaches to Community Detection | Lucca, Italy |
| | ECCS 2014 | |
| 12-14 Mar 2014 | Community detection on quantum systems | Bologna, Italy |
| | CompleNet 2014 | |
| 22-24 Jan 2014 | Community Detection on Quantum Systems | Zaragoza, Spain |
| | BIFI2014 | |
| 24-26 May 2013 | Degree distribution in quantum complex networks | Waterloo, Canada |
| | IQC workshop on quantum computation and complex networks | |
| 6-8 Nov 2012 | Ground state spin logic | Torino, Italy |
| | Tensor Network States and Algebraic Geometry Workshop | |
| 2-4 Feb 2011 | Equilibrium and kinetics of the ankyrin repeat protein Myotrophin through a simple statistical mechanical model | Zaragoza, Spain |
| | V BIFI National Conference | |
| 5-7 Feb 2009 | Bayesian Characterization of Protein Tandem Mass Spectra | Zaragoza, Spain |
| | IV BIFI National Conference | |
| 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)

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|----------------|---|-----------------|
| 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

Mauro Faccin