

Sandro Sousa

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Research Interest

- Dynamical processes on networks with focus on random walks
- Heterogeneity of spatial distribution on complex systems
- Applications of complex network theory to society and urban systems
- Networks approach to the analysis of data sets

Languages

Portuguese Mother tongue
English Full professional proficiency

Experience

- Current **PhD Candidate**, Queen Mary University of London, London, UK.
Research on quantifying the heterogeneity of spatially-embedded systems through random walks with particular interest on socio-economic segregation in urban systems.
- May 2016 – **Research Associate**, University of São Paulo, BR, University College London, UK.
May 2017 Research Associate on a project between Brazilian and British academics entitled RESOLUTION where the cities of London and São Paulo were compared in respect to social segregation and transport accessibility (funded by ESRC (UK) and FAPESP (BR)).
- Dec 2011 – **Business Intelligence Architect**, Braskem, São Paulo, BR, Chemical and Plastics.
Jun 2014 Management of business Intelligence projects. Involved in project's full cycle including design, development and deployment of data solutions on the SAP ERP platform.
- Oct 2010 – **Business Intelligence Consultant**, Accenture, São Paulo, BR, Management Consulting.
Dec 2011 Design, development and deployment of business Intelligence solutions on the SAP platform and SQL Server databases.
- Feb 2010 – **Business Consultant**, DBM Systems, São Paulo, BR, IT and Services.
Oct 2010 Design, development and deployment of business processes on the TOTVS ERP platform and SQL Server Databases.
- Aug 2009 – **Business Analyst**, Totvs, Maringá, BR, Computer Software.
Feb 2010 Design, development and deployment of business processes on the TOTVS ERP.
- Jul 2008 – **ERP Systems support Intern**, MRV Engenharia, Belo Horizonte, BR, Civil Engineering.
Apr 2009 Technical support to TOTVS ERP platform and Microsoft Dynamics CRM.

Education

- 2017 – 2021 **PhD in Mathematical Sciences**, Queen Mary University of London, London, UK.
(expected) thesis: “Quantifying spatial heterogeneity through random walks on graphs”
- 2014 – 2016 **MSc in Complex Systems Modelling**, University of São Paulo, São Paulo, BR.
thesis: “Study of properties and robustness of the public transport network of São Paulo”
- 2012 – 2013 **Postgraduate Certificate in Information Management and Business Intelligence**, Business School São Paulo, São Paulo, BR.
- 2006 – 2008 **Graduate Diploma in Computer Network Management**, Inforium College of Technology, Belo Horizonte, BR.

Teaching

- 2019-2020 Demonstrator on Introduction to Computer Programming in Python (MTH5001) at QMUL.
2018-2019 Demonstrator on Probability and Statistics I (MTH4116/MTH4216) at QMUL.

Scholarships and Grants

- 2019 **CSS Scholarship** for the Mediterranean School of Complex Networks, Salina, Fondazione Bruno Kessler.
2019 **yrCSS Travel Grant** for the Complexity72h Workshop, IMT School for Advanced Studies Lucca.
2017 **Research Studentship** Queen Mary Principal's Award, QMUL.
2016 **Research Scholarship** Technical Training Award, Sao Paulo Research Foundation (FAPESP).
2016 **Travel Grant** for the Summer School on Understanding Urban Transformations thought Data, Manchester School of Architecture.
2014 **Research Studentship** Coordenação de Aperfeiçoamento de Pessoal de Nível Superior, CAPES.

Conferences, Schools and Workshops

- Dec 2019 Alan Turing Institute Data Study Group, London, UK.
Sep 2019 Mediterranean School of Complex Networks, Salina, IT.
Jul 2019 3rd UK Network Science Workshop, Leeds, UK.
Jul 2019 International Workshop on Networks and Urban Systems, London, UK.
Jun 2019 Complexity72h Workshop, Lucca, IT.
Oct 2018 2nd UK Network Science Workshop, London, UK.
Sep 2018 Conference on Complex Systems, Thessalokini, GR (**talk presented**).
Jun 2018 NetSci International Conference on Network Science, Paris, FR.
May 2018 Network Micro-structures Workshop, London, UK.
Apr 2018 The Second King's Workshop on Random Graphs and Random Processes, London, UK.
Jan 2018 Next Generation Network Analytics, London, UK.
Sep 2016 DACAS Summer school on Understanding Urban Transformations through Data, Manchester, UK (**talk presented**).
Jun 2016 DACAS/ICTP Workshop on Modelling of Urban Systems, Sao Paulo, BR (**talk presented**).
Mar 2016 Workshop on Agent-Based Modelling for Social Sciences, Sao Paulo, BR.
Sep 2015 Complex Systems Digital Campus '15 – World, e-Conference (**talk presented**).
Sep 2015 School on Complex Networks and Applications to Neuroscience, Sao Paulo, BR (**talk presented**).

Computer skills

- Advanced Python, Git/GitHub
Intermediate QGIS, OS X, SQL Database, UML, Linux, \LaTeX .
Basic R language, Netlogo