Mariano Gastón Beiró Villani
Curriculum Vitae

PERSONAL INFORMATION

Family name	Beiró Villani
Given name	Mariano Gastón
Date of birth	22nd March 1984
Mail	mbeiro@fi.uba.ar

CURRENT POSITIONS

National Scientific and Technical Research Council, Argentina `06/2017-curr.`
Research Associate.

School of Engineering, Universidad de Buenos Aires, Argentina `07/2017-curr.`
Associate Professor.
Currently in charge of the course on *Database Systems* for the degree in Informatics Engineering.

ACADEMIC DEGREES

Doctor in Engineering `2009-2013`
Universidad de Buenos Aires
>Doctoral dissertation: "Combinatorial models of Complex Systems: Methods and Algorithms".
>Grade: 10/10, *summa cum laude*. Advisor: Dr. José Ignacio Alvarez-Hamelin.

Engineer in Informatics `2002-2008`
Universidad de Buenos Aires, School of Engineering
>Grade: 9.30/10, *(with honors)*.
>Undergraduate dissertation: "Visualization of Complex Systems". Grade: 10/10. Advisor: Dr. José Ignacio Alvarez-Hamelin.

TEACHING EXPERIENCE AND COURSE DEVELOPMENT

Database Systems (96 teaching hours) `03/2017-curr.`
Professor
> Mandatory course for the degree in Informatics Engineering at School of Engineering, Universidad de Buenos Aires (UBA). I updated the curricula for the course, introducing contents on NoSQL databases and data analytics.

Computer Organization II (128 teaching hours) `03/2017-07/2017`
Assistant professor
> Mandatory course for the Bachelor in Computer Sciences at School of Exact and Natural Sciences, Universidad de Buenos Aires (UBA).

Distributed Operating Systems (32 teaching hours) `09/2011-09/2012`
Professor
> Mandatory course for the Master in Telecommunications at School of Engineering, Universidad de Buenos Aires (UBA)

Introduction to Distributed Systems (96 teaching hours) `03/2008-10/2014`
Teaching assistant
> Mandatory course for the degree in Informatics Engineering at School of Engineering, Universidad de Buenos Aires (UBA).

PUBLICATIONS

PUBLICATIONS IN JOURNALS WITH PEER REVIEW

Evolution of the political opinion landscape during electoral periods
T. Mussi Reyero, **M. G. Beiró**, J.I. Alvarez-Hamelin, L. Hernández, D. Kotzinos
EPJ Data Science 10:31
`https://doi.org/10.1140/epjds/s13688-021-00285-8.` `2021`

Traditional versus Facebook-based Surveys: Evaluation of biases in self-reported demographic and psychometric information
K. Kalimeri, **M. G. Beiró**, A. Bonanomi, A. Rosina, C. Cattuto
Demographic Research 42(5), 133–148
`https://dx.doi.org/10.4054/DemRes.2020.42.5.` `2020`

Close proximity interactions support transmission of ESBL-K. pneumoniae but not ESBL-E. coli in healthcare settings
A. Duval, T. Obadia, P-Y Böelle, (...), **I-Bird Study Group**
PLOS Computational Biology 15(5)
`http://doi.org/10.1371/journal.pcbi.1006496.` `2019`

Predicting demographics, moral foundations, and human values from digital behaviours
K. Kalimeri, **M. G. Beiró**, M. Delfino, R. Raleigh C. Cattuto
Computers in Human Behavior, Volume 92, 428–445.
`https://doi.org/10.1016/j.chb.2018.11.024.`
2019

Analysis of the Bitcoin blockchain: socio-economic factors behind the adoption
F. Parino, **M. G. Beiró**, L. Gauvin
EPJ Data Science, 7:38.
`https://doi.org/10.1140/epjds/s13688-018-0170-8.`
2018

Shopping mall attraction and social mixing at a city scale
M. G. Beiró, L. Bravo, D. Caro, C. Cattuto, L. Ferres, E. Graells-Garrido
EPJ Data Science, 7:28.
`http://dx.doi.org/10.1140/epjds/s13688-018-0157-5.`
2018

Measuring dynamic social contacts in a rehabilitation hospital: effect of wards, patient and staff characteristics
A. Duval, T. Obadia, L. Martinet, (...), **I-Bird Study Group**
Scientific reports, Volume 8, Article Number 1686
`http://doi.org/10.1038/s41598-018-20008-w.`
2018

Predicting human mobility through the assimilation of social media traces into mobility models
M. G. Beiró, A. Panisson, M. Tizzoni, C. Cattuto
EPJ Data Science, 5:30.
`http://dx.doi.org/10.1140/epjds/s13688-016-0092-2.`
2016

Router-level community structure of the Internet Autonomous Systems
M. G. Beiró, S. P. Grynberg, J. I. Alvarez-Hamelin
EPJ Data Science, 4:12.
`http://dx.doi.org/10.1140/epjds/s13688-015-0048-y.`
2015

Detailed contact data and the dissemination of Staphylococcus aureus in hospitals
T. Obadia, R. Silhol, L. Opatowski, (...), **I-Bird Study Group**
PLoS computational biology, Volume 11, Number 3.
`https://doi.org/10.1371/journal.pcbi.1004170.`
2015

Deciphering the global organization of clustering in real complex networks
P. Colomer de Simón, M. A. Serrano, **M. G. Beiró**, J. I. Alvarez-Hamelin, M. Boguñá
Scientific Reports, Volume 3, Article Number 2517.
`http://dx.doi.org/10.1038/srep02517.`
2013

Obtaining communities with a fitness growth process
M. G. Beiró, J. R. Busch, S. P. Grynberg, J. I. Alvarez-Hamelin
Physica A, Volume 392, Issue 9, 2278-2293
`http://dx.doi.org/10.1016/j.physa.2013.01.031.`
2013

Understanding edge-connectivity in the Internet through core-decomposition
J. I. Alvarez-Hamelin, **M. G. Beiró**, J. R. Busch
Internet Mathematics, Volume 7, Issue 1, 45–66.
`http://dx.doi.org/10.1080/15427951.2011.560786.` `2011`

A low complexity visualisation tool that helps to perform complex systems analysis
M. G. Beiró, J. I. Alvarez-Hamelin, J. R. Busch
New Journal of Physics, Volume 10, Number 12, 125003
`http://dx.doi.org/10.1088/1367-2630/10/12/125003.` `2008`

PRESENTATIONS IN CONFERENCES WITH PEER REVIEW

Tracking the political opinion landscape in Twitter during electoral periods
T. Mussi Reyero, M. G. Beiró, J.I. Alvarez-Hamelin, L. Hernández, D. Kotzinos
Conference on Complex Systems (CCS'21), Lyon, Francia. `2021`

Human Values and Attitudes towards Vaccination in Social Media
K. Kalimeri, M. G. Beiró, A. Urbinati, A. Bonanomi, A. Rosina, C. Cattuto
Data Science for Social Good Workshop (WDSSG2019), Companion Proceedings of the 2019 World Wide Web Conference (WWW'19 Companion), San Francisco, USA. `2019`

Topic-based study of a Twitter political network
T. Mussi Reyero, J. I. Alvarez-Hamelin, M. G. Beiró
International School and Conference on Network Science (NetSciX'19), Santiago, Chile. `2019`

Analysis of the Bitcoin blockchain: Socio-economic factors behind the adoption
F. Parino, M. G. Beiró and L. Gauvin
Conference on Complex Systems (CCS'18), Tesalónica, Grecia. `2018`

Removing Time Dependencies in Semantic Analysis in the New York Times Corpus
C. Selmo, M. G. Beiró, J. F. Martínez, J. I. Alvarez-Hamelin
Understanding Opinion and Language Dynamics Using Massive Data (OpLaDyn Satellite), Conference on Complex Systems (CCS'18), Tesalónica, Grecia. `2018`

Automatic Prediction of Youth Unemployment via Social Media Data
K. Kalimeri, M. G. Beiró, A. Bonanomi, A. Rosina and C. Cattuto
Complex Systems for the Most Vulnerable (CS4V18 Satellite), Conference on Complex Systems (CCS'18), Tesalónica, Grecia. `2018`

Characterization of the adopters of the Bitcoin
F. Parino, M. G. Beiró, L. Gauvin
BIFI International Conference 2018 (BIFI18), Zaragoza, España. `2018`

The Role of Shopping Malls in Social Inequality
M. G. Beiró, C. Cattuto, L. Bravo, D. Caro, L. Ferres and E. Graells-Garrido
1st European Symposium on Societal Challenges in Computational Social Sciences Londres, Reino Unido. `2017`

Predicting Demographics, Moral Foundations, and Human Values from Digital Behaviors

K. Kalimeri, M. G. Beiró, R. Raleigh and C. Cattuto

1st European Symposium on Societal Challenges in Computational Social Sciences

Londres, Reino Unido. `2017`

What do our digital records reveal about us? Automatic Prediction of Demographic and Psychometric Attributes from Digital Data

K. Kalimeri, M. G. Beiró, R. Raleigh, C. Cattuto

International Conference on Computational Social Science (IC2S2 2017)

Colonia, Alemania. `2017`

Traditional versus Facebook-based Surveys: Evaluation of Biases in Self-reported Psychometric Information

K. Kalimeri, M. G. Beiró, A. Bonanomi, A. Rosina, C. Cattuto

Social Media and Demographic Research Workshop (SMDR17)

Montreal, Canadá. `2017`

Improving human mobility prediction with geo-tagged pictures

M. G. Beiró, A. Panisson, M. Tizzoni, C. Cattuto

NetMob 2017, Milán, Italia. `2017`

Inference of human mobility networks through the assimilation of social media traces into mobility models

M. G. Beiró, A. Panisson, C. Cattuto

Conference on Complex Systems (CCS'15), Tempe, Arizona (US). `2015`

Deciphering the global organization of clustering in real complex networks

P. Colomer de Simón, M. A. Serrano, M. G. Beiró, J. I. Alvarez-Hamelin, M. Boguñá

European Conference on Complex Systems (ECCS'13), Barcelona, España. `2013`

Visualizing communities in dynamic networks

M. G. Beiró, J. R. Busch, J. I. Alvarez-Hamelin

LAWDN – Latin-American Workshop on Dynamic Networks, Buenos Aires, Argentina, inria-00531761. `2010`

SnailVis: a paradigm to visualize complex networks

M. G. Beiró, J. R. Busch, J. I. Alvarez-Hamelin

39º Jornadas Argentinas de Informática e Investigación Operativa, Argentine Symposium on Technology (JAIIO-AST '10), Mar del Plata, Argentina, p. 1682-1693. `2010`

PREVIOUS POSITIONS

ISI Foundation, Turin, Italy   `2014-2017`
Postdoctoral researcher

> Researcher in the *Computational Social Science* group. Research lines: Machine Learning for human mobility models, semantic exploration of large cities, prediction of demographic and psychometric attributes.

Institut rhônalpin des Systèmes Complexes, Lyon, France   `2011`
Research internship

> Research internship of 4 months at IXXI *(Institut rhônalpin des Systèmes Complexes)*, ENS-Lyon (France) working on the MOSAR project on the analysis of data from face-to-face contacts in hospitals.

SACTBA project, Buenos Aires, Argentina   `2007-2008`
C++ Developer

> Stage at the *Buenos Aires Adaptive System for Traffic Control (SACTBA)* from Buenos Aires City Government, as a C++ developer for the communication protocols between traffic light controllers and servers, and the visual interface for monitoring stations.

CONFERENCE ORGANIZATION AND EVALUATION

Jornadas Argentinas de Informática (JAIIO).   `2020-2021`
Program chair in the 49 JAIIO and 50 JAIIO, with ∼250 accepted contributions per year.

International Conference on Web and Social Media (ICWSM)   `2021-2022`
Member of program committee for the 2nd and 3rd *Workshop on Data for the Wellbeing of Most Vulnerable.*

Networks Conference 2021   `2021`
Member of program committee for the *Opinion and Language Dynamics* Satellite, organized by the Opladyn project.

THESIS AND FINAL PROJECTS DIRECTION AND EVALUATION

Thesis advisor.   `2017-2021`
Advisor of the MSc thesis in Informatics Engineering of 2 students, and 1 on course.

Final projects advisor.   `2017-2021`
Advisor of the final project in Informatics Engineering of 10 students.

Member of thesis examining committees.   `2017-2021`
Member of the examining committee for 3 MSc thesis in Informatics Engineering and 1 MSc thesis in Computer Sciences at Universidad de Buenos Aires, and 2 MSc thesis in Data Mining at Universidad Austral.

Member of prize juries.   `2021`
Member of the jury in the 2021 Annual Prize for Best Engineering thesis of the Argentine Center of Engineers (CAI).

OTHER KNOWLEDGE

LANGUAGES

Spanish	Mother tongue.
English	Full professional competence.
Italian	Full professional competence.
French	Intermediate competence.