

Giorgio Triulzi

Curriculum Vitae

November 8, 2021

Assistant Professor
Universidad de los Andes School of Management
g.triulzi@uniandes.edu.co
Calle 21#1-20 Bogotá, Colombia
Personal website: giorgio-triulzi.com
LinkedIn: [here](#); Google Scholar: [here](#)

EDUCATION

PhD in Economics and Policy Studies of Technical Change
UNU-MERIT and Maastricht University, Maastricht, Netherlands
2015

MSc. in Economics of International Markets and New Technologies (full grade cum laude)
Bocconi University, Milan, Italy
2009

Bachelor in Economics of International Markets and New Technologies
Bocconi University, Milan, Italy
2006

PROFESSIONAL APPOINTMENTS

Assistant Professor
Universidad de los Andes, School of Management
2018- to date

Postdoctoral Associate
Massachusetts Institute of Technology, Institute for Data, Systems and Society
2016-2017

Postdoctoral Researcher
Singapore University of Technology and Design
2015

PUBLICATIONS

Refereed journal articles

2021, "Technological improvement rate predictions for all technologies: Use of patent data and an extended domain description", with Anuraag Singh and Chris Magee, *Research Policy*, Volume 50, Issue 9, November 2021, 104294

2020, "Estimating Technology Performance Improvement Rates by Mining Patent Data", with Jeff Alstott and Chris Magee, *Technological Forecasting and Social Change*, Vol 158, 120100.

2020, "Functional performance improvement data and patent sets for 30 technology domains with measurements of patent centrality and estimations of the improvement rate", *Data in Brief* (ISSN 2352-3409), 32.

2019, "Quantification of Technological Progress in Greenhouse Gas (GHG) Capture and Mitigation using Patent Data", with Mahdi Sharifzadeh and Chris Magee, *Energy and Environmental Science*, 12(9), 2789-2805.

2019, "Overlay technology space map for analyzing design knowledge base of a technology domain: the case of hybrid electric vehicle", with Binyang Song, Bowen Yan, Jeff Alstott and Jianxi Luo, *Research in Engineering Design*, 30(3), 405-423.

2018, "Cyclic dependence, vertical integration, and innovation: The case of Japanese electronics sector in the 1990s", with Jianxi Luo, *Technological Forecasting and Social Change*, 132, 46-55.

2018, "Is There a Moore's Law for 3D Printing?", with Chris Benson and Chris Magee, *3D Printing and Additive Manufacturing*, 5(1), 53-62.

2017, "Inventors Explorations Across Technology Domains", with Jeff Alstott, Bowen Yan and Jianxi Luo, *Design Science*, 3. doi:10.1017/dsj.2017.21

2017, "Mapping Technology Space by Normalizing Patent Networks", with Jeff Alstott, Bowen Yan and Jianxi Luo, *Scientometrics*, Volume 110, Issue 1, pp 443-479.

2014, "R&D and Knowledge Dynamics in University-Industry Relationships in Biotech and Pharmaceuticals: an Agent-Based Model", with Ramon Scholz, Andreas Pyka, *International Journal of Biotechnology*, Volume 13, Issue 1-3, pp. 137-179.

2012, "Knowledge flows - Analyzing the core literature of innovation, entrepreneurship and science and technology studies" with Samyukta Bhupatiraju, Bart Verspagen, Önder Nomaler, *Research Policy*, Volume 41, Issue 7, Pages 1121-1282

2011, "Learning-by-Modeling: Insights from an Agent-Based Model of University-Industry Relationships", with Andreas Pyka, *Cybernetics and Systems*, Volume 42, Issue 7 pp. 484-501

Book chapters

2019, “Technological change in fuel cell technologies”, with Mirko Hu and Mahdi Sharifzadeh, in “Design and Operation of Solid Oxide Fuel Cells”, edited by Mahdi Sharifzadeh (ISBN 978-0-12-815253-9), pp. 3-41, Elsevier.

Manuscripts under review

“Tracing the emergence of new technology: a comparative analysis of five technological domains”, with Incha Park and Chris Magee, under review at *Technovation*.

Manuscripts in preparation

“Studying the Evolution of the Backbone of Technology Development: Surveying Information Centrality in the Patent System”, with Chris Magee.

“From Knowledge Flows to Technical Information: Patent Citations as Signal of Technical Interactions”, with Guillermo Ruiz-Pava and Chris Magee.

“Dynamic Mapping of Industry-Technology Linkages to Predict Economic Performance”, with Anuraag Singh and Chris Magee.

“How Effective are Latin American Coding Bootcamps as a Mean to Obtain an In-Field Job?”

AWARDS

Best poster award
2015 Conference on Complex Systems
Tempe, AZ, US, October 2015

Best symposium paper award
International Symposium on Agent-Based Modeling
University of Vienna, Austria, May 2010

Outstanding PhD paper award
European Meeting on Applied Evolutionary Economics
Max Planck Institute of Evolutionary Economics, Jena, Germany, May 2009

GRANTS

Fondo semilla del Comité de Investigación de la Facultad de Administración de la Universidad de los Andes
2021, equivalent to 7.800 USD

Fondo semilla de la Oficina de Proyectos de la Facultad de Administración de la Universidad de los Andes
2021, equivalent to 17.000 USD

Universidad de los Andes Vice-Presidency for Research Postdoctoral funding
2019-2022, equivalent to 65.000 USD

MIT International Science and Technology Initiatives (MISTI)
Project title: “Studying the Evolution of the Backbone of Technology Development”
2019-2021, 25.000 USD

Fondo de Apoyo para Profesores Asistentes (FAPA) – Universidad de los Andes
Project title: “Systematic empirical analysis of the rate and direction of technological change to identify potential high-growth and diversification pathways”
2019-2022, equivalent to 32.000 USD

INVITED TALKS

2019, Workshop “Tracking innovation trajectories in the complex economy”. Organizer: Universidad de Turin y Institute for New Economic Thinking. October 7-9, 2019.

2019, XII Conference on Frontier Research in Applied Economics
Organizer: Research Group on Economic Modeling and Quantitative Methods, Universidad Nacional de Colombia, Department of Economics, Bogotá, Colombia. March 11, 2019

2018, Workshop on Innovation, Industrial Dynamics and Industrial Policy
Organizer: Universidad Jorge Tadeo Lozano, Department of Economics, Bogotá, Colombia. October 12, 2018

2017, Workshop on Economics of Innovation, Complexity and Knowledge
Organizer: Collegio Carlo Alberto, Turin, Italy. December 19, 2017

2017, Workshop “Collective Learning and Economic Geography”
Organizer: Cesar Hidalgo, MIT-Media Lab, Cambridge, US. March 22, 2017

CONFERENCE PARTICIPATION

2021, International Joseph A. Schumpeter Society Conference, Rome, Italy

2019, European Meeting on Applied Evolutionary Economics, SPRU, University of Sussex

2018, DRUID Society Conference, Copenhagen Business School

2016, Micro Evidences on Innovation and Development Conference, Higher School of Economics, Moscow, Russia

2016, Global Tech-Mining Conference, Universidad Politécnica de Valencia, Spain

2016, International Joseph A. Schumpeter Society Conference, Montreal

2015, Conference on Complex Systems, Arizona State University

2015, International Asia-Pacific Innovation Conference, Zhejiang University of Science and Technology, Hangzhou, China

2015, European Meeting on Applied Evolutionary Economics, Maastricht University and UNU-MERIT, the Netherlands

2014, International Joseph A. Schumpeter Society Conference, Friedrich Schiller University, Jena, Germany

2014, New England Complex Systems Institute Summer Course in Complexity, Cambridge, MA

2013, International Asia-Pacific Innovation Conference, Taiwan National University

2013, European Meeting on Applied Evolutionary Economics, SKEMA Business School, Nice, France

2013, SUNBELT Social Networks Conference of the International Network for Social Network Analysis

2011, Globelics Conference, Buenos Aires, Argentina

2011, Dynamics of Institutions and Markets in Europe Conference, UNU-MERIT, Maastricht, the Netherlands

2010, Advances in Agent-Based Computational Economics, University of Bielefeld, Germany

2010, International Symposium on Agent-Based Modeling, University of Vienna, Austria

2009, Conference of the Annual European Association for Evolutionary Political Economy, University of Amsterdam, the Netherlands

2009, European Meeting on Applied Evolutionary Economics, Max Planck Institute for Evolutionary Economics, Jena, Germany

CAMPUS TALKS

2021, “The Pace of Technological Innovation and Value Creation”, Seminario del Grupo de Investigación en Gestión Pública, 12-10-2021

2019, “Technological trajectories. What they are, why we should measure them, how to do it and why managers, economists, policy makers, university deans and chancellors should care”, INTERACT group meeting – 30 January 2019

MEDIA COVERAGE

- The Wall Street Journal, "[New Research Busts Popular Myths About Innovation](#)", Sept. 18, 2021
- Financial Times, "[Innovation still requires smart, even barmy, innovators](#)", Sept. 2021
- Fast Company, "[MIT built a Google search to spot the most important tech innovations of the future](#)", Oct. 10, 2021
- TNW, "[MIT researchers use AI to predict the next big things in tech](#)", Aug. 4, 2021
- The Economic Times of India, "[New AI tool by MIT predicts how fast any technology is improving](#)", Oct. 29, 2021
- Agendadigitale.eu, "[L'algoritmo che svela la velocità di cambiamento delle tecnologie: come funziona e a cosa serve](#)", Nov. 2, 2021
- Deutsche Welle, "[Hyping the future: Our exponential era](#)", 2018

TEACHING EXPERIENCE

Universidad de los Andes, School of Management

Undergraduate in Management

- Strategic Management of Technological Innovation
 - 2018-2nd semester
 - 2019-1st semester
 - 2019-2nd semester
 - 2020-1st semester
 - 2020-2nd semester
 - 2021-2nd semester
- Entrepreneurship and Innovation
 - 2020-2nd semester
 - 2021-1st semester
 - 2021-2nd semester
- Management of Public Goods (Gestión de lo Público)
 - 2018-1st semester

MSc and PhD in Management

- Business, Technology, Innovation, and Diffusion
 - 2018-2nd semester
 - 2019-2nd semester

Master and PhD in Technological Innovation Management

- Strategic Management of Technological Innovation 1
 - 2020-1st semester
 - 2021-1st semester
- Strategic Management of Technological Innovation 2
 - 2020-2nd semester

Master in Development Practice

- Laboratorio de Sostenibilidad
 - 2021-1st semester

Singapore University of Technology and Design
Introduction to Applied Statistics (graduate level)
July – October 2015

School of Business and Economics, Maastricht University
September 2010 – August 2014

- Innovation in Economics and Business
- Microeconomics
- Principle of Economics
- International Economics
- Banking
- Development Economics

SUPERVISION

Co-supervisor

Postdoctoral researcher Guillermo Ruiz Pava, shared position between MIT and Universidad de los Andes, May 2019-ongoing

Supervisor

Of several undergraduate and graduate research assistant at Universidad de los Andes, January 2019-ongoing

Co-supervisor

Visiting Graduate Research Assistant Mariam Barry at MIT-IDSS between May – August 2016

SERVICE TO PROFESSION

Journal manuscript review

Research Policy
Industrial and Corporate Change
Technology Forecasting and Social Change
Scientometrics
Journal of Evolutionary Economics
Plos One

Conference Satellite Session Organizer

Co-organizer of a satellite session on Complexity Economics at the International Joseph A. Schumpeter Society Conference 2016

Co-organizer of a satellite session on Technology at the Conference on Complex Systems 2015

SERVICE TO MY UNIVERSITY

August 2019 - to date, Co-organizer of Agora Research Seminar Series at School of Management, Universidad de los Andes

2021, Part of team that consulted Ecopetrol (largest Colombian firm)

May 2019-March 2020, Member of the Accreditation Committee, Universidad de los Andes, School of Management

2018-2019, Member of the Exchange and Double-Degree Program Committee, Universidad de los Andes, School of Management

PROFESSIONAL MEMBERSHIPS

International Joseph A. Schumpeter Society

LANGUAGES

Italian (native)

English (fluent)

Spanish (fluent)

French (medium)