

Curriculum Vitae

1st January 2025

Giovanni Bella

Personal details

Date of birth: 19 February 1974, Ozieri (SS)
Citizenship: Italian
Marital status: free

Academic position

Associate Professor of Economics (SSD: ECON-01/A, GSD: 13/ECON-01)
Department of Economics and Business
University of Cagliari
Via Sant'Ignazio 17 - 09123 Cagliari
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Education

Dec. 1999 -: Laurea in Economia e Commercio – University of Cagliari. Mark: 110/110 *cum laude*. Thesis: *Sviluppo sostenibile e crescita endogena*. Supervisor: Prof. Beniamino Moro.
Dec. 2002 -: Master of Science in Economics - University of Essex - United Kingdom.
May 2005 -: Ph.D. in Economics – University of Cagliari. Supervisor: Prof. Romano Piras. Thesis: *Sustainability, Pollution and Endogenous Growth*.
Jan. 2004 – Oct. 2019 -: *Assistant Professor* of Economics (SECS/P-01), Department of Economics and Business, University of Cagliari.
Jul. 2018 -: National Scientific Habilitation (ASN) obtained for the position of Associate Professor in SECS/P-01 – Economic Policy (sector 13/A1).
Oct. 2019 – *present* -: *Associate Professor* of Economics (SECS/P-01), Department of Economics and Business, University of Cagliari.
June 2023 -: National Scientific Habilitation (ASN) obtained for the position of Full Professor in SECS/P-01 – Economic Policy (sector 13/A1).

Spoken languages

English: fluent
French: fluent
Spanish: elementary

Research interests

Actual research interests are inserted in the field of endogenous growth literature, studying the problems of indeterminacy of equilibrium, and the role of bifurcating and chaotic solutions, in driving the system towards the long run steady state, both in continuous and discontinuous economic scenarios. Another particular area of interest is reserved to the study of the investigation of the long run relationship between polluting activities and economic growth within the literature regarding the Environmental Kuznets Curve hypothesis.

Memberships and affiliations

- INDI Fellow, at Institute for Nonlinear Dynamical Inference, The University of Kansas (U.S.A.)
- Member of Società Italiana di Economia – SIE
- Member of European Association of Environmental and Resource Economists – EAERE
- referee for: Journal of Economic Theory; Journal of Mathematical Economics; Macroeconomic Dynamics; Nonlinear Analysis: Modelling and Control; Economic Modelling; Economic Journal; Economics Bulletin; The B.E. Journal of Theoretical Economics; Oxford Economic Papers; International Journal of Bifurcation and Chaos; Decision on Optimal Control Applications and Methods; Italian Economic Journal; Journal of Sustainable Tourism; Journal of Cleaner Production; Economic Inquiry; Journal of Economic Dynamics and Control; Current Issues in Tourism; Energy Economics; Health Policy; International Journal of Tourism Research; Journal of Infrastructure, Policy and Development; Journal of Travel Research.

Board of Journals

- Member of the Editorial Board of *Journal of Travel Research*.

Publications and work in progress

- [x] Bella G., Mattana P., Venturi B. (2024) Stabilization of chaotic dynamics emerging in an economy with international labor migration. *SOCIAL SCIENCES & HUMANITIES OPEN*, vol. 10, pp. 101067, ISSN: 2590-2911, doi: <https://doi.org/10.1016/j.ssaho.2024.101067>. First on-line 2024.
- [x] Bella G., Mattana P., Venturi B. (2024) Stabilization of chaotic dynamics emerging in an economy with international labor migration. *SOCIAL SCIENCES & HUMANITIES OPEN*. ISSN: 2590-2911, doi: . First on-line 2024.
- [x] Barnett W., Bella G., Ghosh T., Mattana P., Venturi B. (2022) Controlling chaos in New Keynesian macroeconomics. *STUDIES IN NONLINEAR DYNAMICS & ECONOMETRICS*. ISSN: 1558-3708, doi: 10.1515/snde-2021-0106. First on-line 2022.
- [x] Barnett W., Bella G., Ghosh T., Mattana P., Venturi B. (2022) Is policy causing chaos in the United Kingdom? *ECONOMIC MODELLING*. ISSN: 0264-9993, doi: 10.1016/j.econmod.2022.105767. First on-line 2022.
- [x] Barnett W., Bella G., Ghosh T., Mattana P., Venturi B. (2022) Shilnikov Chaos, Low Interest Rates, and New Keynesian Macroeconomics. *JOURNAL OF ECONOMIC DYNAMICS AND CONTROL*. ISSN: 0165-1889, doi: 10.1016/j.jedc.2021.104291. First on-line 2022.
- [x] Bella G., Mattana P., Venturi B. (2022) Existence and implications of a pitchfork-Hopf bifurcation in a continuous-time two-sector growth model. *JOURNAL OF ECONOMIC INTERACTION AND COORDINATION*, vol. 17(1), pp. 259-285. ISSN: 1860-7128, doi: 10.1007/s11403-021-00331-8. First on-line 2021.
- [x] Bella G., Mattana P., Venturi B. (2021) Globally indeterminate growth paths in the Lucas model of endogenous growth. *MACROECONOMIC DYNAMICS*, vol. 25, pp. 693-704. ISSN: 1469-8056, doi: 10.1017/S1365100519000373. First on-line 2019.
- [x] Bella G., Mattana P. (2020) Chaos control in presence of financial bubbles. *ECONOMICS LETTERS*. First on-line 2020. doi: 10.1016/j.econlet.2020.109314
- [x] Bella G., Liuzzi D., Mattana P., Venturi B. (2020) Equilibrium selection in an environmental growth model with a S-shaped production function. *CHAOS, SOLITONS AND FRACTALS*, vol. 130, pp. 109432, ISSN: 0960-0779, doi: 10.1016/j.chaos.2019.109432. First on-line 2020.
- [x] Bella G., Massidda C. (2021) The Trade-Off Between Tourism and Pollution for Japanese Economic Growth. *TOURISM*, vol. 69(3), pp. 381-394. ISSN: 1332-7461, doi: 10.37741/t.69.3.4. First on-line 2021.
- [x] Bella G., Mattana P. (2019) Policy implications in an environmental growth model with a generalized Hotelling depletion of non-renewable resources. *JOURNAL OF ENVIRONMENTAL ECONOMICS AND POLICY*, vol. 8(2), pp. 179-192. ISSN: 2160-6552, doi: 10.1080/21606544.2018.1530612.
- [x] Bella G., Mattana P. (2019) Multiple equilibria and global indeterminacy in an endogenous growth model with congestible public goods. *JOURNAL OF PUBLIC ECONOMIC THEORY*, vol. 21(2), pp. 291-309. ISSN: 1467-9779, doi: 10.1111/jpet.12340.
- [x] Bella G., Massidda C. (2019) A Kaya decomposition analysis of tourism-related CO2 emissions in Italy. *IL MONDO CHE CAMBIA*. ISBN: 9788891798701, pp. 143-151.
- [x] Bella G. (2018) Estimating the Tourism induced Environmental Kuznets Curve in France. *JOURNAL OF SUSTAINABLE TOURISM*, vol. 26 (12), pp. 2043-2052. ISSN: 1747-7646, doi: 10.1080/09669582.2018.1529768.
- [x] Bella G., Mattana P. (2018) Global indeterminacy and equilibrium selection in a model with depletion of non-renewable resources. *DECISIONS IN ECONOMICS AND FINANCE*, vol. 41 (2), pp. 187-202. ISSN: 1593-8883, doi: 10.1007/s10203-018-0218-z.
- [x] Bella G., Mattana P., Venturi B. (2017) Shilnikov chaos in the Lucas model of endogenous growth. *JOURNAL OF ECONOMIC THEORY*, vol. 172, pp. 451-477. ISSN: 0022-0531, doi: 10.1016/j.jet.2017.09.010.
- [x] Bella G., Mattana P. (2018) Bistability of equilibria and the 2-tori dynamics in an endogenous growth model undergoing the cusp–Hopf singularity. *NONLINEAR ANALYSIS: REAL WORLD APPLICATIONS*, vol. 39, pp. 185-201, ISSN: 1468-1218, doi: 10.1016/j.nonrwa.2017.06.013.
- [x] Bella G. (2017) Homoclinic bifurcation and the Belyakov degeneracy in a variant of the Romer model of endogenous growth. *CHAOS, SOLITONS AND FRACTALS*, vol. 104, pp. 452-460, ISSN: 0960-0779, doi: 10.1016/j.chaos.2017.08.025.
- [x] Bella G. (2017) A Note on the Bogdanov–Takens Bifurcation in the Romer Model with Learning by Doing. *INTERNATIONAL JOURNAL OF BIFURCATION AND CHAOS IN APPLIED SCIENCES AND ENGINEERING*, vol. 27 (1), 1750002 (9 pages), ISSN: 0218-1274, doi: 10.1142/S021812741750002X.
- [x] Bella G. (2017) Periodic solutions and global indeterminacy in a model of sustainable tourism. *JOURNAL OF TOURISM THEORY AND RESEARCH*, vol. 3(2), pp. 119-132, ISSN: 2548-7583.
- [x] Bella G. (2017) Beyond the Accelerating Inflation Controversy: the Jerk and Jounce Price Variation. *INTERNATIONAL JOURNAL OF ECONOMICS AND FINANCIAL RESEARCH*, vol. 3(11), pp. 315-322, ISSN: 2411-9407.
- [x] Bella G. (2016) A note on the Bautin bifurcation in the modified Romer model with endogenous technical change. *FAR EAST JOURNAL OF MATHEMATICAL SCIENCES*, vol. 99 (4), pp.549-568, ISSN: 0972-0871, doi: 10.17654/MS099040549.
- [x] Bella G. (2015) Homoclinic Bifurcation and Endogenous Cycles in the Dynamic IS-LM Model. *JOURNAL OF REVIEWS ON GLOBAL ECONOMICS*, vol. 4, pp. 242-250, ISSN:1929-7092, doi: 10.6000/1929-7092.2015.04.24.
- [x] Bella G. (2015) The Shilnikov Saddle-Node Bifurcation in a Monetary Policy with Endogenous Time Preference. *JOURNAL OF ECONOMICS AND DEVELOPMENT STUDIES*, vol. 3, pp. 47-56, ISSN: 2334-2390, doi: 10.15640/jeds.v3n1a4.
- [x] Bella G., Mattana P. (2014) Global indeterminacy of the equilibrium in the Chamley model of endogenous growth in the vicinity of a Bogdanov–Takens bifurcation. *MATHEMATICAL SOCIAL SCIENCES*, vol. 71, pp. 69-79, ISSN: 0165-4896, doi: 10.1016/j.mathsocsci.2014.05.001.
- [x] Bella G., Massidda C., Mattana P. (2014) The relationship among CO2 emissions, electricity power consumption and GDP in OECD countries. *JOURNAL OF POLICY MODELING*, vol. 36, pp. 970-985, ISSN: 0161-8938, doi: 10.1016/j.jpolmod.2014.08.006.
- [x] Bella G., Mattana P., Venturi B. (2014) Kaldorian assumptions and endogenous fluctuations in the dynamic fixed-price is-lm model. In: Faggini M, Parziale A. *COMPLEXITY IN ECONOMICS: Cutting Edge Research*. ISBN: 978-3-319-05184-0.

- [x] Bella G. (2014) Distortionary taxes and global indeterminacy in an endogenous growth model with elastic labor supply. *MATHEMATICAL FINANCE LETTERS*, vol. 2014 ID 5, ISSN: 2051-2929.
- [x] Bella G., Mattana P., Venturi B (2014) Some notes on the structure of limit sets in IS-LM models. *PROCEDIA: SOCIAL & BEHAVIORAL SCIENCES*, vol. 108, pp. 260-269, ISSN: 1877-0428, doi: 10.1016/j.sbspro.2013.12.836.
- [x] Bella G. (2013) Multiple cycles and the Bautin Bifurcation in the Goodwin Model of a class struggle. *NONLINEAR ANALYSIS: MODELLING AND CONTROL*, 18, pp. 265-274. ISSN: 1392-5113.
- [x] Bella G., Massidda C., and Etzo I. (2013) A Panel Estimation of the Relationship between Income, Electric Power Consumption and CO2 Emissions. *APPLIED ECONOMICS QUARTERLY*, 59 (2), pp. 149-166. ISSN: 1611-6607, doi: 10.3790/aeq.59.2.149.
- [x] Bella G. (2013) Endogenous discounting and global indeterminacy. *MODERN ECONOMY*, 4, p. 750-757. ISSN: 2152-7245
- [x] Bella G. (2013) The poverty-environment trap in a modified Romer model with dirtiness. *ENVIRONMENTAL MODELING AND ASSESSMENT*, vol. 18 (6), pp. 629-638. ISSN: 1420-2026, doi: 10.1007/s10666-013-9372-4.
- [x] Bella G., Mattana P., and Venturi B. (2013) Kaldorian assumptions and endogenous fluctuations: a note on Schinasi's IS-LM model. *INTERNATIONAL REVIEW OF ECONOMICS*, 60 (1), pp. 71-81. ISSN: 1865-1704, doi: 10.1007/s12232-013-0176-2
- [x] Bella G., Mattana P., and Venturi B. (2013) The double scroll chaotic attractor in the dynamics of a fixed-price IS-LM model. *INT. J. MATHEMATICAL MODELLING AND NUMERICAL OPTIMISATION*, Vol. 4 (1), pp. 1-13.
- [x] Bella G. (2010) Periodic solutions in the dynamics of an optimal resource extraction model. *ENVIRONMENTAL ECONOMICS*, vol. 1; p. 49-58, ISSN: 1998-6041.
- [x] Bella G. (2010) Equilibrium dynamics and local indeterminacy in a model of sustainable tourism. In: F. Cerina, A. Markandya, M. Mcleer. *ECONOMICS OF SUSTAINABLE TOURISM*. Routledge, ISBN: 978-0-415-58385-5, doi: 10.4324/9780203842331.
- [x] Bella G. (2009) Polluting Productions and Sustainable Economic Growth: A Local Stability Analysis. *JOURNAL OF SERVICE SCIENCE AND MANAGEMENT*, vol. 2; p. 47-55, ISSN: 1940-9907.
- [x] Bella G. (2024) Emergence of chaotic dynamics in the Goodwin model with disequilibrium in the goods market. Paper under Revision, Second Revision (R&R) to "Structural Change and Economic Dynamics".
- [x] Bella G. (2024) The route to chaos under stabilizing passive monetary policy. Submitted to "Portuguese Economic Journal".
- [x] Bella G., Kogan, K., Mattana P., Tsadikovich, D., and Venturi, B. (2024) Boundary solutions, Skiba points and global indeterminacy in the Lucas model of endogenous growth. Work in progress.
- [x] Bella G., Mattana P., Nishimura K., and Shigoka T. (2019) Homoclinic Bifurcations and Global Indeterminacy in the Chamley's Model of Endogenous Growth. Revised and resubmitted to "Journal of Economic Dynamics and Control".

Other courses and personal experiences:

- Sett. 2019: NED2019 – 11th International Conference on Nonlinear Economic Dynamics – Kyiv (Ukraine)
- Sett. 2018: Amases2018 – 42nd Annual Meeting of the Association for Mathematics Applied to Social and Economic Sciences – Napoli (Italy)
- Sept. 2017: Amases2017 - 41st Annual Meeting of the Association for Mathematics Applied to Social and Economic Sciences – Cagliari (Italy)
- Sept. 2017: NED2017 – 10th International Conference on Nonlinear Economic Dynamics – Pisa (Italy)
- May 2017: 9th Chaos Conference 2017 International Conference – Barcelona (Spain)
- May 2017: Operations Research Society of Israel (ORSIS) Annual Meeting – Bar Ilan University, Tel Aviv (Israel)
- Oct. 2016: 57ma Riunione Scientifica annuale della Società Italiana degli Economisti – Milano (Italy)
- June 2016: Pet 2016. Association for Public Economic Theory. Annual Meeting. Rio de Janeiro (Brasil)
- Oct. 2015: 56ma Riunione Scientifica annuale della Società Italiana degli Economisti – Napoli (Italy)
- May 2015: 8th Chaos Conference 2015 International Conference – Paris (France)
- June 2012: ISEE 2012 Conference - Ecological Economics and Rio+20: Challenges and Contributions for a Green Economy – Rio de Janeiro (Brasil)
- June 2012: CHAOS 2012: The 5th Chaotic Modeling and Simulation International Conference – Athens (Greece)
- July 2011: XVIII EAERE Conference – Rome (Italy)
- May 2011: 4th Chaos 2011 International Conference – Crete (Greece)
- Nov. 2010: Regional Studies Association Winter Conference, Regions and the Environment – London (UK)
- Oct. 2010: 51ma Riunione Scientifica annuale della Società Italiana degli Economisti – Catania (Italy)
- Mar. 2010: Royal Economic Society (RES) Conference – Guildford (UK)
- Oct. 2009: Poverty traps: an empirical and theoretical assessment – International conference. Napoli (Italy)
- June 2009: XVII EAERE Conference – Amsterdam (The Netherlands)
- Oct. 2008: "Sustainable Development: Demographic, Energy and Inter-generational Aspects" – Strasburgo (France)
- Oct. 2008: 49ma Riunione Scientifica annuale della Società Italiana degli Economisti – Perugia (Italy)
- Oct. 2007: "First Conference of The International Association for Tourism Economics" – Palma di Maiorca (Spain)
- July 2007: 4th International Conference on "Developments in Economic Theory and Policy – Bilbao (Spain)

- Aug. 2006: 8th Bioecon International Conference – Cambridge (UK);
- June 2004: XIII EAERE Conference – Budapest (Hungary);
- Sept. 2003: EAERE - FEEM - VIU Scuola estiva in Environmental Economics - Political Economy of the Environment - Venezia;
- July-Aug. 2003: Scuola estiva in Economics of the Environment - London School of Economics - London;
- From Oct 2002 to Apr 2003: Visiting Student - University of Essex (UK);
- June 2001: Summer school of econometrics, CIDE - Bertinoro (Forlì);
- May 2000 - Mar. 2001: Assistente in Economia Politica e Matematica presso UNO - Consorzio Universitario di Oristano;
- June 1996: Jean Monnet course on the functioning of European Institutions.

Teaching activities:

“Macroeconomics” (undergraduate course)
University of Cagliari
From 2005 to present

“Monetary Economics and Financial Markets” (undergraduate course)
University of Cagliari
From 2017 to 2018

“Environmental and Cultural Policies” (postgraduate course)
University of Cagliari
From 2017 to present

“Environmental Economics” (postgraduate course)
University of Cagliari
From 2005 to 2013

“Economics of cultural and environmental goods”
Master course in Management of cultural, environmental and touristic goods
University of Cagliari
From 2006 to 2007

“Environmental Policies” (postgraduate course)
Consorzio Universitario di Oristano
From March 2006 to June 2006

“Environmental Policies” (undergraduate course)
University of Cagliari
From October 2005 to January 2006

Participation to National and Regional research projects

2006/07 – PRIN Project “Trappole della povertà ed equilibri multipli: uno schema interpretativo per lo sviluppo del Mezzogiorno”, Principal Investigator Salvatore Vinci. Research Units: Università degli Studi di Napoli “Parthenope”; Università degli Studi di Cagliari; Seconda Università degli Studi di Napoli; Università degli Studi di Verona.

2008 – “Una rilettura del carattere dualistico dell'economia italiana alla luce dei nuovi schemi interpretativi emersi dal dibattito teorico ed empirico”, progetto finanziato dall'Assessorato della Programmazione, Bilancio, Credito e Assetto del territorio su Legge Regionale 7 agosto 2007, n.7.

2016 – “Economic Growth, Cultural Values and Institutional Design: Theory and Empirical Evidence”, project financed by Fondazione di Sardegna – L.R. 7/2007.

2019 – “Technological change, asset pricing and human capital accumulation”, project financed by Fondazione di Sardegna – L.R. 7/2007.

2021 – “The Role of Skill-Biased Technological Change in Immiserizing Growth and Spatial Employment Polarization”, project financed by Fondazione di Sardegna – L.R. 7/2007.

2022 – PRIN Project “The Role of Skill-Biased Technological Change in Immiserizing Growth, Spatial Polarization, and Product Quality Upgrading”, Principal Investigator Alessio Moro. Research Units: Università degli Studi di Cagliari; Università degli Studi di Napoli “Parthenope”.