# **Curriculum Vitae**

# Raghavendran Srinivasan

Azim Premji University, School of Arts and Sciences, Bengaluru, India.

Email: Raghav.Srinivasan@apu.edu.in;

#### 1. Education

Ph. D. (2002): Economics, Jawaharlal Nehru University, New Delhi, India. Dissertation Title: Effective Demand, Employment, and Income Distribution.

M.Phil. (1995): Economics, Centre for Development Studies, Trivandrum, Kerala, India. Dissertation Title: Total Factor Productivity Growth: A Short-Run Equilibrium Analysis.

M.Phil. (1993): Economics, Madurai Kamaraj University, Madurai, Tamil Nadu.

Dissertation Title: Supply Response and Area Response of Groundnut Cultivation in Madurai District.

M.Sc. (1992): Statistics, Annamalai University, Chidambaram, Tamil Nadu, India.

B.Sc. (1990): Mathematics, Madura College, Madurai Kamaraj University, Madurai, India.

# 2. Employment history

**Associate Professor,** Azim Premji University, Bangalore, India (Jan 2023)

Director, Graduate Research Programme in Economics, National University of Ireland, Galway, 2018-2022

Associate Director (Research), Whitaker Institute, National University of Ireland, Galway, 2011-2015

Senior grade Lecturer (Tenured), National University of Ireland, Galway, 2009-2022 (Eq. to Associate Professor in the US)

Lecturer (Below-the-Bar), National University of Ireland, Galway, Ireland, 2004-09.

**Associate Professor** (tenured), The Faculty of Social Sciences, Aalborg University, Denmark, 2006-07 (Appointed).

Assistant Professor: Madras School of Economics, Chennai, India, 2003-04.

Research Associate: Madras School of Economics, Chennai, India, 2000-03.

# 2.1. Awards, Distinctions, Positions, and Invited Professorships

- 1. Unité Mixte de Recherche CNRS 7234, Université Paris 13, Sorbonne Paris Cité. CNRS-CEPN Professeur invité at the CEPN (CNRS Centre for Economics, Paris North), 2022.
- 2. Unité Mixte de Recherche CNRS 7234, Université Paris 13, Sorbonne Paris Cité. *Professeur invité* at the CEPN (CNRS Centre for Economics, Paris North), 2017.
- 3. La Sapienza University, Rome, Italy Awarded the prestigious *Professor for Research Activities 2014*.
- **4. Indian Institute of Science, Bangalore, India** *Visiting Professor*, Centre for Contemporary Studies (2012-2017); Centre for Society and Policy (2019-2023).
- **5.** LANCET Commission, London, UK *Invited researcher*, Economics Working Group
- **6. Hewlett Foundation & American University**, Washington DC, USA *Macroeconomics group*, Care work and the Economy.

- 7. The University of San Martin de Porres, Peru Advisor, International Advisory Committee.
- **8.** Structuralist Developmental Macroeconomics Research Group, University of Brasilia, Brazil External member,
- **9. Government of India Commonwealth Scholarship** to pursue Ph.D. at Oxford University, 1997 (Nominated by the Government of India).
- **10.** Indian Council for Social Science Research (ICSSR) Fellowship, Centre for Development Studies (CDS), Kerala, India, 1995.
- 11. Trust Worth Charitable Endowment Fellowship for scoring University first rank in M.Phil. Economics in M.K. University, Madurai, India, 1993.

#### 3. Professional Activities

# 3.1 International Journal refereeing

European Journal of Economics and Economic Policies, Zeitschrift für Nationalökonomie (Journal of Economics), Metroeconomica, Structural Change and Economic Dynamics, Physica A, Economic Method, Routledge Book Manuscript Reviewer, Economic and Political Weekly, Feminist Economics, Journal of International Development

# 3.2 International Advisory Committees and Association Membership

- 1. International reviewer, UN Women, Geneva
- 2. International Labour Organization, Turin, Italy.
- 3. European Association for Evolutionary Political Economy (EAEPE)
- 4. International Association for Feminist Economics (IAFFE)
- 5. Management Committee COST Action KNOWeSCAPE (2013-2017)

#### 3.3 Research Grants

#### 3.1 Major Research Grants

1. Funder: Department for International Development, UK (DFID)

Grant amount: £1.5 million UK Sterling pound

Topic: Economic and Social costs of Violence against women and girls (Co-PI)

**Duration**: January 2015 - March 2019

2. Funder: Environmental Protection Agency (EPA), Ireland

Grant amount: €100.000

Topic: Economic Assessment of the Waterborne Outbreak of Cryptosporidiosis in Galway (Co-PI)

**Duration:** March 2014-April 2015

#### 3.2 Minor Research Grants

In addition, I have also led/participated in smaller projects with total funding of €260,000, including the following:

1. Funder: The World Bank

Grant amount: US \$15,000

Topic: "Costs and Consequences: Examining the effects of violence against women and girls on economic development" (co-

PI)

**Duration:** 2013 – 2014

# 2. Funder: UNFPA (United Nations Population Fund)

Grant amount: US \$85,000

Topic: "Gender Equality, Sexual and Reproductive Health and Poverty Reduction: Understanding the Links with Economic

Growth and Improvements in Household Income" with McGill University, Canada

**Duration:** 2010-12

#### 3. Funder: "Innovative and Strategic Research Fund", NUI Galway

(Co-funded by Irish Government and European Union, HEA and ISSP, European Regional Development Fund.)

Grant amount: €20,000

Topic: "Social Sciences Computing Hub" (PI)

**Duration: 2013-2015** 

#### 4. Funder: "Research Strategic Fund (RSF)", NUI Galway

(Co-founded the research Centre with funding from and COST Action "Physics of Competition and Conflict" & MACSI

(Mathematics Applications Consortium for Science and Industry)

Grant amount: €20,000

Topic: "Complex Systems Research Centre" (www.nuigalway.ie/core)

**Duration:** 2011 – ongoing

#### 5. Funder: Teagasc (National Agricultural Research Institute, Ireland)

**Grant amount:** €65,000

**Topic:** "Natural resources and Financial options"

**Duration:** 2009 – 2012

#### **6. Funder: IRCHSS** (Irish Research Council for Humanities and Social Sciences)

**Grant amount: €45,000** 

**Topic:** "Price Discovery and Volatility Modeling in Bond and Credit Default Swap Markets"

**Duration:** 2012- 2016

# 7. Funder: "Frontier Research Themes" initiative, NUI Galway

**Grant amount: €45,000** 

Topic: "Dynamic Macroeconomics: The case of Real Sector, Monetary Sector Interaction"

**Duration:** 2011-2014

# 4. Research

#### 4.1 Publications

#### **4.1.1 Books**

[1] 'An Introduction to Economic dynamics: Modelling, Analysis and Simulation', Routledge: London, UK (ISBN 9780367341893, 2023)

[2] "Economic dynamics and simulation in Python and R", Routledge: London, UK (Forthcoming, 2024)

[3] "Economic and Social Impacts of Violence against women: Implications for Development", Routledge: London, UK (Forthcoming, 2024).

#### 4.1.2 Peer-reviewed articles

[1] 'Heterogenous consumption behaviours in Asian Developing Countries', *Journal of Asian Business and Economic Studies*, (Forthcoming 2024).

- [2] 'A macroeconomic developmental perspective of Indian economic growth', *Developmental Macroeconomics Bulletin*, (2023), v.3(1), 47-62
- [3] 'Financial Growth and Crash under Shadow banking', *Review of Political Economy* (2022) (with Amit Bhaduri) <a href="https://doi.org/10.1080/09538259.2022.2099667">https://doi.org/10.1080/09538259.2022.2099667</a>
- [4] 'Self-employment as a Development strategy: The dual constraints of Care-Work and Aggregate Demand, *Feminist Economics*, 2022 <a href="https://doi.org/10.1080/13545701.2022.2044497">https://doi.org/10.1080/13545701.2022.2044497</a> (with Ramaa Vasudevan)
- [5] "Community cohesion and violence against women in Ghana, Pakistan, and South Sudan", *Women's Health*, 2022, <a href="https://doi.org/10.1177/17455057221123998">https://doi.org/10.1177/17455057221123998</a> (with Sébastian Poix, Nuala Ibrahim, Stacey Scriver, Nata Duvvury and Khalifa Elmusharaf)
- [6] 'Violence against women and the Macroeconomy: The case of Ghana', *Journal of International Development*, (November 2021 <a href="https://doi.org/10.1002/jid.3588">https://doi.org/10.1002/jid.3588</a>) (with Kijong Kim, Sinéad Ashe, Mrinal Chadha, Felix Asante, Petri Piiroinen, Nata Duvvury)
- [7] 'Conflict as Closure: A Kaleckian Model of Growth and Distribution under Financialization', In *Conflict, Demand and Economic Development: Essays in Honor of Amit Bhaduri*, Routledge: London, UK, 2020. (with Petri Piiroinen)
- [8] 'A Non-Smooth Extension of Samuelson Multiplier-Accelerator Model', *International Journal of Bifurcation and Chaos*, 29 (10), 2019 (Published as a Feature article) (with Petri Piiroinen).
- [9] 'The Principle of Effective Demand Under Modern Finance: An Exploration in the traditions of Kalecki and Keynes', *Panoeconomicus*, 65(3), pp. 267-287, 2018.
- [10] 'Wage and Profit-led regimes under modern finance: An exploration', *Review of Keynesian Economics*, 30(3), pp. 303-306, 2017. (with Amit Bhaduri).
- [11] 'Estimating the macroeconomic loss of violence against women using the social accounting framework: The case of Vietnam', *Feminist Economics*, 23(4), pp. 62-89,2017 (with Nata Duvvury and Sinead Ashe).
- [12] 'Economic Assessment of Waterborne Outbreak of Cryptosporidiosis', *Emerging Infectious Diseases*, 23(1), pp. 1650–1656, 2017 (with Chyzheuskaya, A., Cormican, M., R., O'Donovan, D., Prendergast, M., O'Donoghue, C., & Morris, D.).
- [13] 'Lack of critical slowing down suggests that financial meltdowns are not critical transitions, yet rising variability could signal systemic risk', *PLoS ONE*, 2016, 11(1): e0144198 (with Vishwesha Guttal, Nikunj Goel and Quentin Hoarau) (Paper was reviewed in *Nature Asia*, *Nature Publishing Group*).
- [14] 'On the Systemic fragility of finance led growth,' *Metroeconomica*, 2015, 66(1), p.158-186 (with Amit Bhaduri and Vishwesha Guttal).
- [15] 'Economics, Politics and Democracy in the Age of Credit-Rating Capitalism', *Economic & Political Weekly*, 2013, Vol. XLVIII (No. 05), p. 34-38.
- [16] 'Economic Paradigms and Democracy in the Era of Financial Globalization', Yojana, 2013, 57(1), p. 18-23.
- [17] 'Arbitrage-Free Parity Theory for the CDS and Bond Markets' in: M. Cummins et al (2012). <u>Topics in Numerical Methods for Finance</u>, New York: Springer (with Kitty Moloney).
- [18] 'Testing for non-linear dependence in the Credit Default Swap Market', *Economics Research International*, 2011, Article Id. 708704 (with Kitty Moloney).
- [19] 'Decomposition Methods for Analysing Intra-regional and Inter-Regional Income Distribution' In: Peter Flaschel and Michael Landesmann (2008). <u>Mathematical Economics and Dynamics of Capitalism</u>. London: Routledge: Frontiers of Political Economy.
- [20] 'Gender-based Violence, Identity and Development: Initial Explorations", In *Development Futures*, 2008, (with Nata Duvvury).

- [21] 'A framework for testing Algorithmic Trading Strategies', *Automation, Computers, Electronics and Mechtronics*, 2008, 5(32) no. 1, p. 71-79 (with Daniel Parashiev and Laurentiu Vasiliu).
- [22] 'Algorithmic Trading in an Artificial Stock Market'. *Intelligent Distributed Computing, Systems and Applications*, Springer Berlin Heidelberg (with Daniel Parschiv).
- [23] 'Market Polarization in presence of individual choice volatility', In: C. Brunn (2007). <u>Advances in Artificial Economics: The Economy as a Complex Dynamic System</u>. Berlin: Springer. (with Sitabhra Sinha).
- [24] 'Trade Union Movement: CSR, Civil Society and Cross Transnational Labor Relations in the Agriculture and Industry', *Indian Journal of Labor Economics*, 2006, 49, no.4 (with T McDonough & MA Gonzalez-Perez).
- [25] 'Limits to Investment Exhilarationism', *Journal of Economics (Zeitschrift für Nationalökonomie)*, 2006, 87(3):257-280.
- [26] 'Effective Demand and Income Distribution: A Review', Review of Development and Change, 2004,3 (2):151-164.
- [27] 'Hollywood Blockbusters and Long-Tailed Distributions: An Empirical Study of the Popularity of Movies', European Physical Journal B: Condensed Matter and Complex Systems, 2004, 42(2), 293-296 (with Sitabhra Sinha).
- [28] 'Emergence of two-phase behaviour in markets through interaction and learning in agents with bounded rationality' In: H Takayasu (2004). *Practical Fruits of Econophysics*. Tokyo: Springer-Verlag. (with Sitabhra Sinha).

#### 4.1.3 Peer-reviewed articles in International Conference Volumes

- [29] 'Algorithmic trading with human agents and computer agents in a virtual stock & futures market', in *Proceedings of the International Conference on Computational and Financial Econometrics*, 2010 (with Daniel Parashiev).
- [30] 'Stock Scanner Evaluator for Stocks or Options', *IEEE Symposium on Computational Intelligence and Financial Engineering*, 2009 (With Daniel Parashiev and Laurentiu Vasiliu).
- [31] 'An Empirical Investigation of networks in the Blogosphere", in the Proceedings of the *International Conferences on Weblogs and Social Media (ICWSM '07), 2007* (with Uldis Bojars, Andreas Harth and Sheila Kinsella).
- [32] 'Phase Transition and Pattern Formation in a model of Collective Choice Dynamics', *Santa Fe Institute paper*, No: 04-09-028 (With Sitabhra Sinha).

#### 4.1.4 Externally funded peer-reviewed Research reports

- [33] 'Microfinance and the Care Economy', Rethinking Macroeconomics, Care work and the Economy Project, Hewlett Foundation, American University, 2019, Washington DC (with Ramaa Vasudevan)
- [34] 'Estimating Macroeconomic Loss Due to Violence Against Women and Girls: <u>A Policy Toolkit</u>', Department for International Development (DFID), UK, 2019 (with Kim, K., Ashe, S., Chadha, M., Piiroinen, P.T. and Duvvury, N.)
- [35] 'The Macroeconomic Loss Due to Violence Against Women and Girls: The Case of Ghana', Department for International Development (DFID), UK, 2019 (Also published by the Levy Economics Insitute at the Bard College, US) (with Kim, K., Ashe, S., Chadha, M., Piiroinen, P.T. and Duvvury, N.)
- [36] 'The Macroeconomic Loss Due to Violence Against Women and Girls: The Case of <u>Pakistan</u>', Department for International Development (DFID), UK, 2019 (with Kim, K., Ashe, S., Chadha, M., Piiroinen, P.T. and Duvvury, N.)
- [37] 'Guidance on Methods for Estimating Economic and Social Costs of Violence against Women and Girls in Low and Middle Income Contexts' Department for International Development (DFID), UK, 2019, (with Duvvury, N., Scriver, S., Forde, C. Chadha, M., O'Brien, L., Sabir, M., Ballantine, C.)
- [38] 'Economic and Social Costs of Violence against Women in Ghana: Technical Report', Department For International Development (DFID), UK, 2019 (with Asante, F., Fenny, A., Dzudzor, M., Chadha, M., Scriver, S.

- Ballantine, C., Duvvury, N)
- [39] 'Economic and Social Costs of Violence against Women in South Sudan: Technical Report', Department For International Development (DFID), UK, 2019 (with Elmusharaf, K., Scriver, S., Chadha, M., Ballantine, C., Sabir, M., Duvvury, N., Kennedy, J., Grant-Vest, S. and Edopu, P)
- [40] 'Economic and Social Costs of Violence against Women in Pakistan: Technical Report', Department For International Development (DFID), UK, 2019 (with Ghaus, K., Ali, A., Anis, R., Areeb, T., Chadha, M., Ballantine, C., Scriver, S., Duvvury, N)
- [41] 'Cost-Benefit Analysis of Interventions to prevent Intimate Partner Violence in Andhra Pradesh', Andhra Pradesh Development Priorities, Government of Andhra Pradesh and Copenhagen Consensus, 2018.
- [42] 'Cost-Benefit Analysis of Interventions to prevent Intimate Partner Violence in Rajasthan', Rajasthan Development Priorities, Government of Rajasthan and Copenhagen Consensus, 2018.
- [43] 'Intimate Partner Violence: Economic costs and Implications for Growth and Development'. The World Bank, 2013, Washington DC (with Nata Duvvury, Aoife Callan, Patricia Carney).
- [44] 'Economic Assessment of the water born outbreak of Cryptosporidium Hominis in Galway', Environmental Protection Agency, 2016, Ireland (with Dearbháile Morris, Aksana Chyzheuskaya, Diarmuid O'Donovan, Martina Prendergast and Martin Cormican).
- [45] 'Costs of Violence Against Women: An Examination of the Evidence', Department for International Development (DFID), UK, 2016, (with Ashe, S., Duvvury, N., Scriver, S., O'Donovan, D.)
- [46] 'Methodological approaches to estimating Economic costs of violence against women and girls', Department for International Development (DFID), UK, 2016, (with Ashe, S., Duvvury, N., Scriver, S., O'Donovan, D)
- [47] 'Conceptualising Violence: A holistic approach to understanding violence against Women and Girls'. Department for International Development (DFID), UK, 2015 (with Scriver, S., Duvvury, N., Ashe, S., O'Donovan, D.)
- [48] 'E-Commerce: Review and Analysis', Digital Enterprise Research Institute Technical Report 16.03 (2005).
- [49] 'A Comparative Study of Electronic Market Efficiency', Digital Enterprise Research Institute Technical Report: 16.04 (2005) (with Stephen Kinsella).
- [50] 'What Causes Price Dispersion in Online Markets?', Digital Enterprise Research Institute Technical Report: 16.05 (2005) (with Stephen Kinsella).

#### 4.1.5 Contributions to Public debate, Research highlighted in Media and Public Policy briefs

- [1] "Employment and Structural Change in Indian Economy", The Hindu Tamil, September 2023
- [2] "Kalaignar Magalir Urimai Thogai Thittam and Women Empowerment", The Hindu Tamil, September 2023.
- [3] "Investing in the Care Economy", The Hindu Business Line, April 2021
- [4] "Saving the Economy from Development", The Wire, November 2019.
- [5] "Has Economics lost its ability to relate to real world?", RTE Brainstorm, May 2019
- [6] "Looking beyond the engineering field", <u>Deccan Herald</u>, September 2017.
- [7] "Ireland's Economic Pull", *The New Indian Express*, September 2017.
- [8] "Economics and Finance as a career for Science and Tech students", *The Hindustan Times*, August 2017

- [9] "Dismissing Domestic Violence as a 'Private Matter' Ignores Adverse Impact to the Economy", *The Wire.in*, 2017.
- [10] "Economists and Austerity Errors", *Irish Times*, 2013.
- [11] "Tyranny of the Credit Rating Agencies", Look Left, May 2013.
- [12] "An Alternative Vision for the Eurozone Crisis", Whitaker Institute Policy brief, November, 2012.
- [13] "Ecological Science Theory Analyses Stock Market Crashes", Nature Asia, 2016
- [14] "Virtual Explanations for Market Cycles", *Irish Times*, 2009
- [15]"It's market strategy, but in a virtual world of its own", *Irish Independent*, 2009
- [16] "Stock Market goes Virtual", *The Engineer*, UK, 2009.
- [17] "Virtual Stock Market at NUI Galway to Understand Boom Bust Cycles", Mayo Advertiser, 2009
- [18] "A Stock Market Crash and the onset of Ice Age: Disaster siblings?", Serving Science, 2016.

## **4.2** Conference contributions (selective)

#### 4.2.1 Presentations

- [1] "At the Intersection between Class and Gender: Unpaid Care work and Aggregate Demand Regimes", 26<sup>th</sup> Annual Forum for Macroeconomics and Macroeconomic Policies Conference (FMM), Berlin, October 2022.
- [2] "Dynamics of conflict between shareholders and managers: Revisiting the theory of firm under financialisation", *Finance and Economics Modelling*, Maison des Sciences Economiques, University of Paris 1, Paris, May 2019
- [3] "Conflict as a closure: A Kaleckian model of growth and distribution under financialisation", *Amit Bhaduri Festschrift Conference* at the University of Massachusetts, Amherst, US, March 2019
- [4] "Unpaid labour, distribution of income and Macroeconomic regimes", *American Economic Association Conference*, Philadelphia, January 2018
- [5] 'Dynamics of Inter- and Intra- income distribution and effective demand under financialisation', 14<sup>th</sup> International Conference on Developments in Economic Theory and Policy, Cambridge Centre for Economic and Public policy and University of Basque Country UPV/EHU, Bilbao, Spain, June 2017
- [6] "Financial Catastrophe and Macroeconomic dynamics", Multidisciplinary Conference on Complex Systems, Université of Paris 13, Paris, May 2017.
- [7] "Macroeconomic loss due to Violence against women", *Macroeconomics and Gender* conference at the International Monetary Fund, Washington DC, March 2017
- [8] "Gender Sensitive Macroeconomics: Revisiting some growth and distribution models", *American University*, Washington DC, US, *December 2016*.
- [9] "Unpaid labour and distribution of income", paper presented at the 20<sup>th</sup> FMM International conference on "Pluralism in Economics", October 2016.
- [10] "Effective demand under Financialization", paper presented at the 19th FMM international conference on "Spectre of Stagnation: Europe in the World Economy", October 2015.
- [11] "Estimating the Macroeconomic cost of Violence Against Women: The Case of Vietnam", *International Association for Feminist Economics (IAFFE), June 2015*, Berlin.
- [12] "Systemic Fragility of Finance Led Growth", invited paper at the Un-Conference organized by the Post-Crash

Economics Society, University of Manchester, April 2015.

- [13] "Endogenous Money: Understanding credit expansion and abrupt transition from a Post Keynesian Perspective", Invited paper presented at the *Vienna Institute for International Economic Studies, Vienna, September 2014.*
- [14] "Economic Crises and Political Economy of Economic Paradigms", in an International Conference titled "Being Social: An Interdisciplinary Dialogue on Social Behavior", in Indian Institute of Science, Bangalore, India, June 26-29,2013.
- [15] "A Reconsideration of Samuelson's Multiplier-Accelerator Model" in the VIII International Colloquium on "Economic Crisis: In the light of alternative development paradigms", University of Paris, May 2009.
- [16] "Decomposition Methods for Analyzing Intra-regional and Inter-Regional Income distribution", Paper presented in the Workshop in Honor of Richard Goodwin: EAEPE Conference in Bremen, Germany, September 2006.
- [17] "Self-organized Pattern formation in Collective Choice dynamics", Paper presented at the *Workshop in Honour of Nobel Laurate Kenneth Arrow*, Brookings Institution, Washington DC, November 2004.

#### 4.2.2 Conferences Organised (selective)

- [1] "Money, Uncertainty, and the Macroeconomy" Interdisciplinary workshop to engage economists, particularly, the Post Keynesian economists and the Complex Systems scientists who work in this area (Funded by COST Action KNOWeSCAPE and held in March 2016).
- [2] "Modern Finance and Macroeconomics" Interdisciplinary Winter school hosted by the International Centre for Theoretical Studies (ICTS), Bangalore, India (December 2015-January 2016) (Organized with Dr. Vishwesha Guttal and Prof. Srikanth Iyer, IISc, Bangalore, India)
- [3] "Ways of Seeing" A Multidisciplinary conference for cross fertilization of ideas from across the natural and physical sciences to social sciences with an aim to contribute novel research perspectives and framework for the issues of public policy (Funded by the COST Action KNOWeSCAPE in May 2014).
- [4] Workshop on "Finance, Sovereign Debt and Eurozone Crisis" was held in November 2012. The outcome of the workshop is the 'An Alternative Vision Statement for Eurozone Crisis" developed by the participants of the workshop. which was widely covered in the media and published in journals and newspapers across Europe, India (EPW), and Argentina.
- [5] 'Self-Organization, Nonlinearity, and Evolution: From Biology to Economics' was held in October 2011 in NUI Galway. This conference was organized in collaboration with COST action "Physics of Competition and Conflict". The conference was the inaugural event of the Complex Systems Research Centre (CORE), which I co-founded with Dr. Petri Piiroinen in the School of Mathematics in NUIG (<a href="www.nuigalway.ie/core">www.nuigalway.ie/core</a>). The conference was an interdisciplinary gathering that includes Physicists, Mathematicians, Biologists, Engineers, Psychologists, Sociologists and Economists and the objective of the conference was to discuss the methodological limitations of individual disciplines using the lens of Complex Systems Theory.
- [6] VIII International Colloquium on "Economic Growth, Structural Change and Institutions"; May 26-28, 2011 in NUI Galway. This conference which brought together some of the world leading economists, physicists and other scientists from US, South America, Europe, India and Japan. The main objective of the Colloquium was to contribute to the understanding of the 2008 economic crisis from the perspective of Growth, Structural Change, and Institutions. The Colloquium provided a platform to stimulate dialogue from within the discipline of economics and other related disciplines on the issues of the theme to reinforce the multi-disciplinary approach to the study of Political Economy.

#### 4.2.3 Inter Disciplinary research collaboration

I have been working with various researchers and research groups in Europe, US, and India on a range of themes in the areas of my specialization.

- [1] Research collaborator "*Economy as evolving complex adaptive system*", European Cooperation in Science and Technology (COST) Action KNOWeSCAPE.
- [2] Research lead and PI in the new application for COST Action "Financial networks and the Real economy: Evolution, Interaction and Systemic Stability". Leading a consortium of European researchers in the fields of Finance/Economics, Physics, Mathematics, Mathematical Ecology and Sociology & Political Science.
- [3] Research collaborator "Economy as Ecology" with Dr. Vishwesha Guttal in the Indian Institute of Science (IISc), Bangalore, India.
- [4] Research collaborator "Econophysics" with Dr. Sitabhra Sinha, Theoretical Physics Group, Institute of Mathematical Sciences (IMSc), Chennai, India.
- [5] Research collaborator "Complex Systems approach to Cognitive Neurosciences" with Dr. Mark Elliott in the School of Psychology, NUI Galway. As a part of this research, I developed and delivered a new module for the Higher Diploma and advanced undergraduate students in Psychology on "Dynamical Systems Approach to Cognition" in March 2008.
- [6] Principle Investigator and collaborator "Care Work and the Economy Advancing Policy Solutions with gender-aware Macroeconomic models" an international multidisciplinary project of leading Economists and Sociologists from the US, UK, Europe and Asia led by Prof. Maria Floro, American University, Washington DC.
- [7] Research lead and Co-PI Research project on "Economic and Social Costs of Violence Against Women and Girls" with Dr. Nata Duvvury in the Department of Sociology and Political Science, NUI Galway. I was the Co-PI for the Department of International Development (DFID), UK, funded project and led the Macroeconomic costing component of the project.
- [8] Research Collaborator—Industry/academia collaborative research initiative "High-Frequency trading and dynamic stability in Financial Markets", with Dr. Laurentiu Vasiliu, CEO of Peracton.com.

#### 4.3 Ph.D. Supervision

#### **Graduated**

- [1] "Complex Systems approach to financial market analysis: Nonlinearity, Regime shifts and Early warning indicators", Naoise Metadjer, November 2017.
- [2] "An Examination of the Interactions between the Real and Financial Economy", Sinead Ashe, April 2016.
- [3] "Essays on Renewable Natural Resources Management Problems: Fisheries & Forests", Vidyaratne Herath, June 2015.
- [4] "Macroeconomic Volatility and Financial Contagion", Kitty Moloney, July 2012.
- [5] "Modelling and Analysis of Algorithmic Trading Strategies in a Virtual Stock Market", Daniel Paraschiv, November 2010 (Co-Supervied with Dr. Laurentiu Vasiliu, College of Engineering, NUI Galway).
- [6] "Data Envelopment Analysis: Some Methodological Extensions and Applications", November 2009.

# **Current Ph.D students**

- [7] "Complex financial networks and Macroeconomic instability", (To be submitted by June 2025)
- [8] "Social Infrastructure and Economic growth: The case of Saudi Arabian Economy" (Nov 2019- Sep 2024)
- [9] "Monetary policy and Informal Credit Institutions in Vietnam (Nov 2021- Sep 2025)

# 5. Teaching

My teaching portfolio is composed of a wide variety of courses within the areas of my research expertise. I have designed and delivered interdisciplinary modules in economics arising from my research collaborations with other disciplines such as Physics, Mathematics, Engineering, and Psychology. My teaching spans various levels that include undergraduate BA/B.Com./B.Sc., Higher Diploma students (professionals and executives), post-graduate students and Ph.D. students. The list of modules I have taught is given below:

Course title	Level	Class size	Institution
Macroeconomics of Development	MA Economics (2023-)	30	Azim Premji University, India
Macroeconomics 1: Theory and Applications	MA Economics (2023-)	30	Azim Premji University, India
Macroeconomics 2: Theory and Applications	MA Economics (2023-)	30	Azim Premji University, India
Mathematics for Economics	MA Economics (2023-)	30	Azim Premji University, India
Economic Theory	BA/B.Com./B.Sc. (2004-2022) Higher Diploma/Erasmus/International students (Final year UG)	220	NUI Galway, Ireland
Advanced Economic Theory	BA/B.Com./Higher Diploma/Erasmus/ International Students (Final year UG)	60	NUI Galway, Ireland
Topics in Macroeconomic Theory	BA/B.Com./Higher Diploma/Erasmus/ International Students (Final year UG)	80	NUI Galway, Ireland
Mathematical Modelling, Analysis and Simulation	B.Sc. Financial Mathematics and Economics (Second year UG)	60	NUI Galway, Ireland
Seminar in Financial Economics	M.Sc. International Finance	40	NUI Galway, Ireland
Quantitative Methods in Finance	M.Sc. International Finance	40	NUI Galway, Ireland
Money and Banking	B.Sc./B.Com./Higher diploma (Second year UG)	100	NUI Galway, Ireland
Quantitative Methods for Economics	BA/Higher Diploma/Erasmus/ International students/Evening BA (Second year UG)	200	NUI Galway, Ireland
Mathematics for Economics	BA/Higher Diploma/Erasmus/ International students (Second year UG)	150	NUI Galway, Ireland
Comparative Economic Thought	BA/Higher Diploma/Erasmus/ International students (Second year UG)	80	NUI Galway, Ireland
Principles of Economics	Evening BA (First year UG)	50	NUI Galway, Ireland
Macroeconomic Theory and Policy	M.Sc. Economics	40	NUI Galway, Ireland

Macroeconomics and Public Policy	B.Sc./B.Com./B.A./Higher Diploma/ Erasmus/International (Third year UG)	200	NUI Galway, Ireland
Research Seminar in Macroeconomics	PhD Economics	10	NUI Galway, Ireland
Dynamical Systems Approach to Cognition	B.A./Higher Diploma Psychology (Second year UG)	80	NUI Galway, Ireland
Advanced Macroeconomic Theory	M.Sc. Economics	50	Aalborg University, Denmark
Economic development	MA (Development) - Professionals from ILO/UN (2012-2017)	50	International Labour Organization (ILO), Turin, Italy
Macroeconomic theory	M.Sc. Economics (2000-2004)	30	Madras School of Economics, India
Capital Markets	M.Sc. Economics (2000-2004)	30	Madras School of Economics, India
Statistical Methods for Economics	M.Sc. Economics (2000-2004)	30	Madras School of Economics, India
Ways of Doing: Mapping Science- Society Relationship	2 <sup>nd</sup> year UG students, IISc (2013-2017)	100	Indian Institute of Science (IISc), Bangalore, India

# **6.** Contributions to the University community

- [1] Governor University Governing Authority (2021-2025) (Elected)
- [2] Member Academic Council (2018 2025) (Elected two consecutive terms and serving the second term)
- [3] Co Chair School Equality, Diversity, and Inclusion Committee (2021-2023)
- [4] Chair International Staff Network (2020-2023)
- [5] Program Director M.Sc. International Finance (2008-2018)
- [6] Member Vice Dean Committee for Promotion, J. E. Cairnes School of Business and Economics (2007-09)
- [7] Member Internationalisation Committee (2015-2020)
- [8] Member Equality, Diversity, and Inclusion University Committee (2018 -2022)
- [9] Member University Open Research Data Working group (2017-2022)
- [10] Director Social Sciences Computing Hub, NUI, Galway (March 2013-15)
- [11] Editor Economics Working Paper Series (2007-2013)
- [12] Convenor Economics Seminar Series (2007-2010)
- [13] Member Executive Education Working Group, J. E. Cairnes School of Business and Economics (2006 2008)
- [14] Member Arts Advisory Board for 2<sup>nd</sup> Arts (2006-2009)
- [15] Coordinator 2<sup>nd</sup> Year UG Arts Program (2007-2010)
- [16] Coordinator Evening BA program (Economics, 2006-08)
- [17] Universal Design Learning (UDL) Lead, Teaching and Learning Committee, Azim Premji University (2023-)

# 7. References

# 1. Prof. V.K. Nataraj

Professor Emeritus and former Director, Madras Institute of Development Studies, Chennai.

Email: profvk@gmail.com

# 2. Professor Thomas Boylan

Discipline of Economics
J.E. Cairnes School of Business and Economics,
National University of Ireland, Galway

Email: Thomas.Boylan@nuigalway.ie.

# **3.** Mr. Uday Balakrishnan, IPoS Formerly Member of Postal Service Board & Department of Posts, Government of India

&

Ireland

Visiting Faculty, Indian Institute of Science, Bengaluru.

Email: <u>buday@iisc.ac.in</u>

# 4. Professor Amit Bhaduri Leontief Medal Winner and Professor Emeritus, Jawaharlal Nehru University, New Delhi – 110067.

Email: amit.bhaduri@gmail.com

# 5. Prof. Dr. Jakob Kapeller

University Duisburg-Essen Institute for Socio-Economics Duisberg-Essen, Germany

Email: jakob.kapeller@uni-due.de