

GOVINDAN PARAYIL

CURRICULUM VITAE

PERSONAL DATA

Dean and Professor, Patel College of Global Sustainability
Professor, School of Interdisciplinary Global Studies
University of South Florida
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EDUCATION

Ph.D. in Science and Technology Studies, Virginia Tech, Blacksburg, Virginia (1990)
(*Conceptualizing Technological Change: Technology Transfer in the Green Revolution*;
Won Sigma Xi Society Award for Outstanding Ph.D. Dissertation).
M.A. in Applied Economics, American University, Washington, DC (1985).
M.S. in Science, Technology and Values, Rensselaer Polytechnic Institute, Troy, New York
(1983).
B.S. in Electrical Engineering, National Institute of Technology Calicut (1978) (formerly
Regional Engineering College Calicut, University of Calicut).

ACADEMIC PROFESSIONAL HISTORY

- Dean and Professor, Patel College of Global Sustainability, University of South Florida, Tampa, Florida (2017–ongoing).
- Professor (tenured), School of Interdisciplinary Global Studies, College of Arts & Sciences, University of South Florida (2017–ongoing).
- Mark & Melody Teppola Presidential Distinguished Visiting Professor, College of Liberal Arts, Willamette University, Salem, Oregon (2016–2017).
- Vice-Rector, United Nations University (UNU), Tokyo Japan – Academic Arm of the United Nations System (2008–2014).
- Director, United Nations University Institute of Advanced Studies (now Institute for the Advanced Study of Sustainability), Tokyo, Japan (2009–2013, additional charge for 5 years) – International think-tank for advancing science-based policies for global sustainability.
- Full Professor (tenured), Center for Technology, Innovation and Culture, Faculty of Social Science, University of Oslo, Norway (2004–2015): Specialization: Science, Technology and Innovation for Sustainability (on leave from 2008 to 2014).
- Associate Professor & Chair, Department of Information and Communication

Management, Faculty of Arts & Social Sciences, National University of Singapore (2001–2004).

- Assistant Professor of Science, Technology and Society, Division of Social Sciences & Faculty Affiliate, School of Environment Science and Engineering, Hong Kong University of Science and Technology, Hong Kong ((1994–2001).
- Rockefeller Foundation Postdoctoral Fellow in Global Environmental Change, Department of Science and Technology Studies, Cornell University, Ithaca, New York (1993–1994).

VISITING & OTHER POSITIONS/FELLOWSHIPS

- Visiting Scholar, School of International Relations and Public Affairs & Dr. Seaker Chan Center for Comparative International Development Studies, Fudan University, Shanghai, China (2016-2017).
- Visiting Professor, American University of Sovereign Nations, Scottsdale, Arizona (2014-2017).
- Visiting Professor, Graduate School of Decision Sciences, Tokyo Institute of Technology (2009-2013).
- Visiting Professor, Globelics Academy Ph.D. School on Innovation and Economic Development, Tampere University, Tampere, Finland (Summer 2008) & Technical University of Lisbon, Portugal (Summer 2005).
- Academic Member, The Asian Century Project, Nordic Network for Asian Studies & University of Copenhagen, 2005-2008 (Represented University of Oslo).
- Fellow, Salzburg Seminar on the Social and Political Implications of the Internet, Salzburg, Austria, Summer 1998.
- Visiting International Fellow, Center for the Study of Science in Society, Virginia Polytechnic Institute and State University, Blacksburg, VA (1996-2002).
- Rockefeller Foundation Fellowship (1993-1994), Department of Science & Technology Studies, and Program on Ethics in Public Life, Cornell University.
- Visiting Assistant Professor, Department of Humanities, Illinois Institute of Technology, Chicago (1991-1992).
- Visiting Assistant Professor, Program in Humanities, Science and Technology, Virginia Tech (1990-1991).
- Graduate Teaching/Research Fellowships: Rensselaer Polytechnic Institute, American University, and Virginia Tech (1981-1989).

TEACHING & RESEARCH INTERESTS

- Global Sustainability
- Globalization and Political Economy
- Technology and Social Change
- Science and Technology in Society
- Sustainable Innovation
- Climate Change
- Energy Policy
- Risk and Resilience

PUBLICATIONS

AUTHORED & EDITED BOOKS

1. *Sustainable Nanotechnology: Strategies, Products, and Applications*. Y.K. Pathak, G. Parayil, and J.K. Patel. Hoboken, NJ: John Wiley & Sons, 2022, xvii + 366.
2. *Conceptualizing Technological Change: Theoretical and Empirical Explorations*. Lanham, MD and Oxford: Rowman & Littlefield Publishers, Hardcover 1999: Soft cover 2002, viii + 211 pp.
3. *Kerala: The Development Experience: Reflections on Sustainability and Replicability*, London & New York: Zed Books, 2000, x + 280 pp (Editor & Author).
4. *The New Asian Innovation Dynamics: China and India in Perspective*, editors: G. Parayil and A.P. D'Costa, Palgrave Macmillan: Basingstoke, UK, 2009.
5. *Political Economy and Information Capitalism in India: Digital Divide, Development and Equity*, Basingstoke, UK: Palgrave Macmillan, 2006, xiii + 256 pp.
6. *Free and Open Source Technology and Software for Sustainable Development in Developing Countries*, editors: S.K. Sowe and G. Parayil, Tokyo: United Nations University Press, 2012.

BOOK CHAPTERS

1. T. Puri, Y. Pathak, and G. Parayil, "Nanotechnology-Based Research Priorities for Global Sustainability, in *Sustainable Nanotechnology: Strategies, Products, and Applications*. Y.K. Pathak, G. Parayil, and J.K. Patel (Editors). Hoboken, NJ: John Wiley & Sons, 2022, pp. 1-15.
2. G. Parayil, "Change and Development," in Holbrook, J. Britt, and Carl Mitcham, eds. *Ethics, Science, Technology, and Engineering: A Global Resource*, Second Edition. 4 vols. Farmington Hills, MI: Macmillan Reference, 2015, pp. 329-334 (revised and updated).
3. M.V. Mathai and G. Parayil "Toward Equity and Sustainability in the "Green Economy," in *Green Economy and Good Governance for Sustainable Development: Opportunities, Promises and Concerns*, Puppim de Oliveira, Jose A. (Ed.). Tokyo: UNU Press, 2012, pp. 47-70.
4. T.T. Sreekumar and G. Parayil, "Social Space, Civil society and Transformative Politics of New Social Movements," in K. Ravi Raman (Ed.) *Development, Democracy and the State: Critiquing the Kerala Model of Development*, United Kingdom: Routledge, 2010, pp. 237-253.
5. G. Parayil and T.T. Sreekumar, "Interrogating Development: New Social Movements, Democracy and Indigenous People's Struggles in Kerala," in J. Tharamangalam (ed.),

- Kerala: The Paradoxes of Public Action and Development*, New Delhi: Orient Longman, 2006, pp. 215-257.
6. G. Parayil and A.P. D'Costa, "China, India, and the New Asian Innovation Dynamics: An Introduction" in *The New Asian Innovation Dynamics: China and India in Perspective*, G. Parayil and A.P. D'Costa, (eds.), Palgrave Macmillan, UK, 2009, pp. 1-26.
 7. G. Parayil, "The Green Revolution: A Case Study of Technological Change." In D.J. Jeremy and G. Tweedale (eds.), *Business History*. London: Sage Publications, 2004, pp. 143-159.
 8. G. Parayil, "Introduction: Is Kerala's Development Experience a 'Model'?" In G. Parayil (ed.) *Kerala: The Development Experience: Reflections on Sustainability and Replicability*. London: Zed Books 2000, pp. 1-15.
 9. G. Parayil, "Sustainable Development and the Environment." In W. Wehrmeyer and Y. Mulugetta (eds.) *Growing Pains: Environmental Management in Developing Countries*. Sheffield, UK: Greenleaf, 1999, pp. 270-282.
 10. G. Parayil and A.P. D'Costa, "Science, Technology and Innovation Dynamics in India and China" in *The New Asian Innovation Dynamics: China and India in Perspective*, G. Parayil and A.P. D'Costa, (eds.), Palgrave Macmillan, UK, 2009, pp. 287-291.
 11. G. Parayil, "Scientific Enlightenment and Social Activism in India" in *Academics as Public Intellectuals*, S. Eliaeson and R. Kalleberg (eds.), Newcastle, UK: Cambridge Scholars Publishing, 2008, pp. 258-298.
 12. G. Parayil, "The Political Economy of Informational Development" In G. Parayil (ed.), *Political Economy and Information Capitalism in India: Digital Divide, Development and Equity*, Palgrave Macmillan, 2006, pp. 196-217.
 13. G. Parayil, "Introduction: Information Capitalism." In G. Parayil (ed.), *Political Economy and Information Capitalism in India: Digital Divide, Development and Equity*, Basingstoke, UK: Palgrave Macmillan, 2006, pp. 1-10.
 14. G. Parayil, "Change and Development." *Encyclopedia of Science, Technology, and Ethics*, (IV Volumes), C. Mitcham, ed., Detroit: Macmillan Reference USA, 2005, pp 297-301.
 15. K.J. Joseph and G. Parayil, "India-ASEAN Co-operation in Information and Communications Technologies: Issues and Prospects," in R. Sen, et al. (eds.), *Indian-ASEAN Economic Relations - Meeting the Challenges of Globalization*, Singapore: ISEAS, 2005, pp. 219 – 246.
 16. G. Parayil, "Technology and Socio-Cultural Processes: A World Systems Perspective", in Maria J. Santos and R. D. Cruz (eds.), *Technological Innovation and Cultural Processes*, UNAM-Mexico, 1997, pp. 212-229

ARTICLES IN REFEREED JOURNALS

1. S. Ahmed, M.V. Mathai, and G. Parayil, "Household Electricity Access, Availability and Human Well-being: Evidence from India." *Energy Policy*, Vol. 69, 2014, pp. 308-315.
2. G. Haslam, J. Jupesta, and G. Parayil, "Assessing Fuel Cell Vehicle Innovation and the Role of Policy in Japan, Korea, and China." *International Journal of Hydrogen Energy*, Vol. 38, 2012, pp. 14612-14623.
3. Adelne, E.J. Morris, and G. Parayil, "Status of development, regulation and adoption of GM agriculture in Africa." *Food Policy*, Vol. 43, 2013, pp. 159-166.
4. J. Jupesta, R. Boer, G. Parayil and Y. Harayama, "Managing the Transition to Sustainability: Evaluating Green Growth Policies in Indonesia" *Environmental Innovation and Societal Transitions* (Elsevier) Vol. 1(2): 2011, 187–191.
5. J. Jupesta, Y. Harayama, and G. Parayil, "Sustainable business model for biofuel industries in Indonesia" *Sustainability Accounting, Management and Policy* Vol. 2(2): 2011, 231–247.
6. Adenle, S. Sowe, G. Parayil, and O. Aginam, "Analysis of open source biotechnology in developing countries." *Technology in Society*, Vol. 34(3), 2012 pp. 256-269.
7. G. Parayil, "Mapping technological trajectories of the Green Revolution and the Gene Revolution from modernization to globalization." *Research Policy*, Vol. 32 (6), 2003: 971-990.
8. G. Parayil, "From 'Silicon Island' to 'Biopolis of Asia': Innovation Policy and Shifting Competitive Strategy in Singapore." *California Management Review*, Vol. 47(2), 2005: 50-73.
9. G. Parayil and F. Tong, "Pasture-Led to Logging-Led Deforestation in the Brazilian Amazon: The Dynamics of Socio-Environmental Change." *Global Environmental Change*, Vol. 8(1), 1998: 63-79.
10. G. Parayil, "Sustainable Development: A Normatively Neutral Development Paradigm?" *Journal of Applied Philosophy*, Vol. 15(2), 1998: 179-193
11. G. Parayil, "Environment and Development: A Normative Appraisal of Sustainable Development." *Philosophy and Social Action*, Vol. 22(2), 1996: 23-36.
12. G. Parayil, "The 'Kerala-Model' of Development: Development and Sustainability in the Third World." *Third World Quarterly*, Vol. 17(5), 1996: 941-957.
13. J.J. Thomas and G. Parayil, "Bridging the Social and Digital Divides in Andhra Pradesh and Kerala: A Capabilities Approach," *Development and Change*, Vol. 38(3), 2008: 409-435.
14. G. Parayil and T.E.D. Yeo, "More than Electronic Toll Booths: Singapore's Electronic Road Pricing Innovation." *Prometheus*, Vol. 23(2), 2005: 209-226.
15. G. Parayil and T.T. Sreekumar, "Industrial Development and the Dynamics of Innovation in Hong Kong." *International Journal of Technology Management*, Vol. 27(4), 2004: 369-392.
16. G. Parayil, "Practical Reflexivity as a Heuristic for Theorizing Technological Change." *Technology in Society*, Vol. 19(1), 1997: 161-175.
17. G. Parayil, "Economics and Technological Change: An Evolutionary Epistemological Inquiry." *Knowledge, Technology and Policy*, Vol. 12(1), 1999: 60-73 (reprint).
18. G. Parayil, "Technology as Knowledge: An Empirical Affirmation." *Science Communication*, Vol. 13(1), 1991: 36-48.
19. G. Parayil, "The Digital Divide and Increasing Returns: Contradictions of Informational Capitalism." *The Information Society*, Vol. 21(1), 2005: 41-51
20. K.J. Joseph and G. Parayil, "Can Trade Liberalization Bridge the Digital Divide? A Preliminary Assessment of the Information Technology Agreement (ITA) under the WTO," *Economic and Political Weekly*, Vol. 43, 2008: 46-53.

21. G. Parayil and T.T. Sreekumar, "Kerala's Experience of Development and Change: Lessons Old and New." *Journal of Contemporary Asia*, Vol. 33(4), 2003: 465-92.
22. T.T. Sreekumar and G. Parayil, "Contentions and contradictions of tourism as development option: the case of Kerala, India." *Third World Quarterly*, Vol. 23 (3), 2002: 529-548.
23. T.T. Sreekumar and G. Parayil, "Democracy, Development and New Forms of Social Movements," *Indian Journal of Labour Economics*, Vol. 45(2): 387-410, 2002.
24. G. Parayil, "The 'Revealing' and 'Concealing' of Technology." *Asian Journal of Social Science*, Vol. 26(1), 1998: 17-28.
25. G. Parayil, "The Perils of Trying to be Objective without Being Reflexive: The Kerala-Model Revisited." *Journal of Critical Asian Studies*, Vol. 30(2), 1998: 28-31
26. G. Parayil and W. Shrum, "Non-Governmental Research Organizations in Kerala, India." *Science, Technology, and Development*, Vol. 14(1), 1996: 122-132.
27. G. Parayil, "Economics and Technological Change: An Evolutionary Epistemological Inquiry." *Knowledge and Policy*, Vol. 7(1), 1994: 79-91.
28. G. Parayil, "Technological Change as a Problem-Solving Activity." *Technological Forecasting and Social Change*, Vol. 40(3), 1991: 235-248
29. G. Parayil, "Schumpeter on Invention, Innovation and Technological Change." *Journal of the History of Economic Thought*, Vol. 13, 1991: 78-89
30. G. Parayil, "Models of Technological Change: A Critical Review of Current Knowledge." *History and Technology*, Vol. 10, 1993: 105-126.
31. G. Parayil, "Social Movements, Technology and Development: A Query and an Instructive Case from the Third World." *Dialectical Anthropology*, Vol. 17, 1992: 339-35.
32. G. Parayil, "The Green Revolution in India: A Case Study of Technological Change." *Technology and Culture*, Vol. 33(4), 1992: 737-756
33. G. Parayil, "Technological Knowledge and Technological Change." *Technology in Society*, Vol. 13(2), 1991: 289-304
34. G. Parayil, "Development Studies: A Progressive Research Tradition." *Science Studies*, Vol. 3(2), 1990: 47-56
35. G. Parayil, "Science for social revolution: Science and Culture in Kerala." *Impact of Science on Society*, Number 155, 1989: 233-240.

RESEARCH FUNDING/RESEARCH PROJECTS/AWARDS

1. Environmental protection with climate co-benefits in selected major cities in China, India, Indonesia, Brazil and Japan, United Nations University Institute of Advanced Studies, funding of 130 million JPY (\$1.3 million) per year for four years from the Ministry of the Environment, Japan (2009-2013) (with Dr. Jose Puppim de Oliveira).
2. Systems of Innovation and Science and Technology Policy, Research grant from the University of Oslo & Norwegian Research Council, 1,200,000 NOK (2004-2008).
3. Sustainable Innovations, Faculty of Social Sciences, University of Oslo & Norwegian Research Council, NOK 250,000 (2007-2008).
4. The Dynamics of Innovation in Indian IT Industry. FASS Research Grant, National University of Singapore, 2002-03 (S\$ 10,500).
5. Life Sciences in China: Research Policy and Implications. 2002-2004, Faculty Research Fund, National University of Singapore (S\$12,500) (with Cong Cao)
6. Science Parks in Japan, Singapore, South Korea and Taiwan: Lessons for Hong Kong, Industrial Support Fund, Department of Industry, Government of Hong Kong, 1996-2000,

HK\$ 494,210 (Co-PI: S.J. Roh).

7. Industry Department, Hong Kong Government, 1998-1999. Project: Study of the Appropriate Science & Technology Indicators for Hong Kong. (Co-investigator) (HKD 600,000).
8. Free and Open Source Technology and Software for Sustainable Development in Developing Countries – USD 50,000 (Science and Technology for Sustainable Societies Program, United Nations University Institute of Advanced Studies, Tokyo, Japan, 2009-2012 (with S. Sowe).
9. Sigma Xi Society Award for Outstanding Ph.D. Dissertation and Research Achievement, Virginia Tech, 1991 (cash award and certificate).
10. Travel Award for Ph.D. Students, International Science Policy Workshop, AAAS Annual Conference, Washington, DC, 1989.

REVIEWS & OTHER ARTICLES

1. R. Chandran, G. Parayil, et al., “Bytes beyond Borders: Strengthening Transboundary Information Sharing on Wildlife Crime through the Wildlife Enforcement Monitoring System (WEMS) Initiative, Policy Brief “United Nations University Institute of Advanced Studies, 2013, Tokyo, Japan.
2. Adenle, O.C. Aworh, R. Akromah, and G. Parayil, “Developing GM super cassava for improved health and human security,” *Agriculture and Food Security* 1(1), 2012.
3. S. Subramanian and G. Parayil, “Join forces to share biological resources equitably.” *SciDev.Net*, March 4, 2011.
4. G. Parayil, “Innovation Systems and Economic Development: The Global-Local Nexus,” Georgia Institute of Technology, 2005.
5. G. Parayil, “Technological Trajectories and Innovation Systems in Biotechnology,” Georgia Institute of Technology, 2005.
6. K.J. Joseph and G. Parayil, “India-ASEAN Cooperation in Information and Communication Technologies,” Research and Information Systems in Non- aligned and Other Developing Countries, New Delhi, 2004.
7. T.T. Sreekumar and G. Parayil, “Kerala: Ein Modell auf Abwegen” *der ueberblick* No. 3, September 2002: 47-50 (in German).
8. G. Parayil, “Democracy at Work: Review Essay: Democracy at Work in an Indian Industrial Co-operative by Thomas Isaac, et al., Cornell University Press, 1998” *Journal of Critical Asian Studies*, Vol. 31, 1999: 74-78.
9. G. Parayil, “Transcending Technological Pessimism: Reflections on an Alternative Technological Order,” Working Papers in the Social Sciences No. 43, Hong Kong University of Science and Technology, December 1998.
10. G. Parayil, "Yearley's Science, Technology and Social Change: Review." *Social Epistemology*, Vol. 6(1), 1992: 57-63.
11. Parayil, "Yearley's Science, Technology and Social Change: Reply." *Social Epistemology*, Vol. 6(1), 1992: 73-75.
12. Parayil, “Review of The Process of Technological Change in Telecommunications by John Clark, et al.” *Science, Technology, & Human Values*, Vol. 15(1), 1990: 124-125.

SELECTED KEYNOTES, SEMINARS, & CONFERENCE PRESENTATIONS

1. “Sociotechnical Transitions and Climate Futures,” STS Climate Change Conference, U.S. National Science Foundation, Program in Science and Technology Studies, University of

- Southern Indiana, June 2022.
2. "Forging a Fair and an Equitable Global Community: Asian Responses to Contemporary Innovation Challenges," Association for Asian Studies 2021 Annual Conference, March 21-26, 2021.
 3. "The Return of the 'Machinery Question' and the Failed Promise of Globalization," School of Interdisciplinary Global Studies, University of South Florida, May 11, 2017; also delivered as Teppola Distinguished Visiting Professor Lecture, Willamette University, Salem, Oregon, April 18, 2017.
 4. "Science, Technology and Innovation in China and India: Are There Opportunities for Collaboration?" International Workshop on China and India, Dr. Seaker Chan Center for Comparative Political Development Studies, Fudan University, Shanghai, China, June 3, 2017.
 5. "The Relevance of the United Nations in the Contemporary World," University of Western Oregon, Monmouth, Oregon, May 4, 2017 (invited keynote address).
 6. "Newly-Emerging Technologies and the Future of Humanity," Faculty Research Seminar, Hatfield Library, Willamette University, Salem, OR, September 9, 2016.
 7. "Nuclear Power, Development and Geopolitics: Searching for Sustainability in Discourses of Power," Tenth International Conference in Interpretive Policy analysis, Lille, France, July 8-10, 2015 (with Manu V Mathai).
 8. "Sustainable Development and Peace," Ninth World Youth Ambassadors for Peace Conference, Scottsdale, AZ, August 24, 2014 (keynote address).
 9. "Enhancing social justice and reducing inequality key to sustainable international development," Program in Sustainable International Development, Heller School of Social Policy and Management, Brandeis University, Massachusetts, USA, 25 Feb 2014 (invited lecture).
 10. "Urban Development with Climate Co-benefits: Aligning Environment and Development Goals," International Conference jointly organized by UNU Institute of Advanced Studies and The Energy and Resources Institute, New Delhi, 9 December 2013.
 11. "Green Economy, Equity and Sustainable Development in the Asia-Pacific" Fifth International Forum for Sustainable Asia and the Pacific: Regional Perspectives on the Green Economy, Yokohama, Japan, 23-23 July 2013.
 12. "Innovation for Inclusive and Sustainable Development: Research and Policy Options for India," Department of Humanities and Social Sciences, Indian Institute of Technology, New Delhi, 5 February 2013.
 13. "Innovation for Inclusive and Sustainable Development", United Nations University - Elsevier-Scopus - Alexander von Humboldt Foundation: 2013 Young Scientists Award Symposium, Nanyang Technological University, Singapore, 19 August 2013 (keynote).
 14. "Globalization of R&D: The New Asian Innovation Dynamics" National Institute of Science and Technology Policy Tokyo (NISTEP) Seminar, February 1, 2011, Tokyo, Japan (invited lecture).
 15. "Policy issues confronting innovation and inequality challenges in emerging economies" Global Forum on the Knowledge Economy 2013, Knowledge and Innovation for Inclusive Growth, 24 October 2013, Istanbul, Turkey.
 16. "Innovation, Inequality and Inclusive Development," OECD and South African Department of Science and Technology Joint Conference on Innovation for Inclusive Development, Cape Town, South Africa, 21 November 2012 (invited lecture).
 17. "Re-imagining/re-framing technology choice for sustainability" Department of Science

- and Technology Studies, Rensselaer Polytechnic Institute, May 20, 2013 (invited seminar presentation).
18. “Innovation systems and economic development: global-local linkages and equity” and “Mapping the technological trajectories and innovation systems in biotechnology from modernization to globalization.” Technical University of Lisbon, May 23 – June 3, 2005 (invited lectures at PhD Summer School in Innovation and Economic Development).
 19. “Climate Change and Global Innovation Challenges,” Keynote Lecture at Graduate Research Institute for Policy Studies Tokyo (GRIPS), 25 January 2010.
 20. “Intellectual property rights and TRIPS”, Workshop on FDI-led Innovation, Transfer and Dissemination of Knowledge and Multilateral Global and Regional Regulation, jointly organized by University of Oslo and University of Warwick, Oslo 3-5 May 2007.
 21. “National Innovation Policy and Shifting Competitive Strategy in Singapore.” International Conference on New Asian Dynamics in Science, Technology and Innovation, Nordic Institute of Asian Studies, Copenhagen, Sept 27-29, 2006.
 22. “Globalization of Science and R&D: The New Asian Innovation Dynamics and Lessons for Indonesia”, Annual Meeting for Science and Technology Studies 2011, 10-12 June 2011, Tokyo, Japan (invited keynote).
 23. “Globalization of Science and R&D: Skills and Capabilities and the New Asian Innovation Dynamics”, The Third ANDA Conference, Nagoya University, 5 March 2011, Nagoya, Japan.
 24. “Global Sustainability Thinking: Sustainable Futures through Science and Technology”, The Kyoto Earth Forum, 12 February 2011, Kyoto, Japan (keynote).
 25. “Innovation Systems in Developing Countries – The Global and the Local.” Centre for Technology, Innovation and Culture and the Norwegian Business School (BI), January 27-28, 2005, Oslo, Norway.
 26. “Science and Society in the ‘New’ India: Some Critical Reflections”, Centre for Studies in Science Policy (CSSP) Seminar, Jawaharlal Nehru University, 2 February 2011, Delhi, India.
 27. “Scientific Excellence, Scientific Temper and Democratic India,” India-Japan Symposium on Frontiers in Science & Technology: Successes and Emerging Challenges, Embassy of India, Tokyo, 20 September 2012 (invited lecture).
 28. “Research Methods for Sustainability Science,” Institute of Advanced Studies, United Nations University Seminar Series, Yokohama, Japan, 18 Sept 2012
 29. “Open Source Biotechnology as an Innovation Platform for North-South- South Cooperation,” Sixth Asian Conference on Biotechnology and Development, Hyderabad, India 6-7 October 2012 (invited keynote)
 30. “Climate change and Global Sustainability: Challenges of Science, Technology and Society with an Asian Focus” Asia Research Institute, National University of Singapore, 6-7 October 2011, Singapore.
 31. “Sustainable Production and Consumption: Global Challenges, International Commitments and Business Opportunities,” Third ASEAN-Plus-Three Leadership Program on Sustainable Production and Consumption, 6-7 October 2010, Manila, Philippines (keynote).
 32. “Science, Technology and Innovation Challenges for Climate Change,” Keynote Lecture at United Nations University Institute of Advanced Studies, International Symposium on Science, Technology and Innovation: Forging a New Policy Regime for Mainstreaming Green Development, June 24-25, 2010, Yokohama, Japan (opening keynote).
 33. “Understanding the Green Revolution and Its Impact through the Lenses of Modernization and Globalization” International Conference on Green Revolution and World Order, Fudan Institute for Advanced Study in the Social Sciences, Shanghai,

- China, 19-20 December 2009 (invited lecture).
34. "Science and Technology for Sustainable Societies", Distinguished Lecture, Fudan Institute for Advanced Study in Social Sciences, Fudan University, Shanghai, China, 18 December 2009.
 35. "Building an Inclusive Information Society: The Missing Link in Connecting Rural India", International Conference, Subversion, Conversion, Development: Public Interest in Technologies, University of Cambridge, UK, 24-26 April 2008.
 36. "The Internet and e-Development in India: The Missing Dimension," Singapore Internet Research Centre, School of Communication and Information, Nanyang Technological University, May 8, 2006.
 37. "Does the Social Divide Reinforce the Digital Divide? Evidence from Andhra Pradesh and Kerala in India," World Summit on the Information Society (WSIS) Official Event on the Past Present and Future of Research in the Information Society, Tunisia, November 13-15, 2005.
 38. "Digital Inclusion, Open Source and the WSIS Process," Annual Conference of the Norwegian Network for ICT and Development, Oslo, Norway, October 20-21, 2005.
 39. "Quality Assurance at the United Nations University: New Paradigm for Quality Assurance in the Age of Globalization" NIAD-University Evaluation Forum, Tokyo, 26 October 2011, Tokyo, Japan (keynote).
 40. "Sustainability Science and Higher Education from Global Perspectives" 4th International Tokyo Colloquium 2011 on Sustainability Science & Education, Hosei University, 5 October 2011, Tokyo, Japan (keynote).
 41. "Science and Technology for Sustainable Societies", Network for the Promotion of Sustainability in Postgraduate Education and Research Conference, 11-14 July 2011, Manila, Philippines.
 42. "How deep is the Digital Divide?" Developing Country Seminar, Centre for Environment and Development, University of Oslo, Norway, March 29, 2005
 43. "Information Capitalism and the Welfare State," Workshop at the Norwegian Business School (BI), Oslo on "Economy, Welfare and the Environment: The Challenge to Business and the State," 11 March 2005.
 44. "Increasing Returns and Digital Divide: Challenges of Digital Capitalism to Indian Development." International Workshop on ICTs and Indian Development, School of Public Policy, George Mason University and the Department of Management Studies, Indian Institute of Science, Bangalore, India, March 3-5, 2003.
 45. "The Political Economy of Informational Development." International Workshop on Understanding Informational Developments: Mapping a Future Research Agenda, United Nations Research Institute for Social Development, Geneva, Switzerland, 26-27 September 2003.
 46. "Digital Divides and the Denaturalization of the Economy: Some Material Realities." International Conference on the Digital Divide: Technology and Politics in the Information Age, Hong Kong Baptist University 22-23 August 2002.
 47. "Knowledge Society and the Development Paradigm: Bridging the Knowledge Gap." Information & Communication Management Program, National University of Singapore, 23 February 2001.
 48. "Innovation Systems, Knowledge Economy and Development: Challenges for Developing Countries." Innovation and Learning in Developing Countries, Second Globelics Conference, Beijing, 17-20 October 2004 (invited plenary speaker).
 49. "Mapping the Social Context of Innovation from Modernization to Globalization." Faculty of Communication and Culture, University of Calgary, Canada, January 29, 2004.
 50. "Reflections on *The Structure of Scientific Revolutions* and its Relevance to Twenty-first

- Century Science and Technology” Department of History, Philosophy and Social Studies of Science & Technology, Tokyo Institute of Technology, Japan, 13 March 2013 (Annual Visiting Professor Lecture).
51. “Is There a Paradigm Change in Science after 50 Years of *Structure*?” Centre for the Study of Science Policy, Jawaharlal Nehru University, New Delhi, 5 February 2013.
 52. “STS without Borders: A Prolegomenon for Doing STS in Asia”, National University of Singapore & Asia Research Institute, Singapore March 6, 2009 (invited lecture).
 53. “Science and Technology for Sustainable Societies”, International Conference on Sustainability Science, University of Tokyo, February 5, 2009 (keynote).
 54. “South-South Cooperation in Biotechnology: Challenges and Opportunities” Fourth Asian Conference on Biotechnology and Development, Kathmandu, Nepal, February 12, 2009 (keynote).
 55. Science and Technology for a Sustainable Future”, 2008 United Nations University Global Seminar on Science and Technology: The Human Security Perspective, Okinawa, Japan, December 18, 2008 (keynote).
 56. “Climate Change: Challenges for Innovation Studies”, and “Sustainable Innovation Policies and Global Climate Change”, Globelics Academy, PhD Summer School, Tampere University of Technology, Finland, May 11-12, 2008.
 57. “Social Space, Civil Society, and Development: The Crisis of New Social Movements in Kerala State in India.” Norwegian Network for Asian Studies and Centre for Development and the Environment, University of Oslo, Norway, Dec 17, 2003.
 58. "From the Green Revolution to the Gene Revolution: Conceptualizing Technological Change." Department of Social and Political Science, Swiss Federal Institute of Technology, Zurich, 2 Feb 2001.
 59. "Environmental Justice Is Social Justice." Environmental Justice: Global Ethics for the 21st Century, International Academic Conference, University of Melbourne, Australia, Oct 3, 1997.
 60. "Socio-Cultural Processes and Technology: A World Systems Approach." International Colloquium on Technology and Cultural Processes, Universidad Nacional Autonoma de Mexico, Mexico City, February 21-23, 1994.
 61. "Sustainable Development? The Kerala Model Re-assessed." Department of Science & Technology Studies, and South Asia Program, Cornell University, April 8, 1994.
 62. "Symposia on Liberalization and Development in South Asia." South Asia Program, Cornell University, Ithaca, NY, April 8 & 9, 1994.
 63. "Global Environmental Change: The Challenge of Sustainable Development." The New College of Global Studies, Radford University, Radford, Virginia, April 18, 1994.
 64. "Evolutionary Economics and Evolutionary Epistemology: A Knowledge- Based Approach to Explaining New Technology Development." Industrial Policy Group, Indian Institute of Management, Ahmadabad, India, November 2, 1992.
 65. “The Bhopal Technological Tragedy Revealed.” Faculty Research Seminar, Division of Social Science, Hong Kong University of Science and Technology, May 26, 1999.
 66. “Global Agenda for the Public Understanding of Science: Science as a Social Movement.” Economic and Social Research Council and the University of Durham Cyber Conference on Public Understanding of Science, February 27 – March 5, 1998.
 67. "Development and Sustainability: The ‘Kerala Model’ of Development." Faculty Research Seminar, Division of Social Science, Hong Kong University of Science and Technology, February 12, 1997.
 68. "The Revealing and Concealing of Technology." Joint Meetings of the Society for the Social Studies of Science, and the European Association for the Study of Science & Technology, Bielefeld, Germany, October 10-13, 1996.

69. "The Relevance of Social Science: The Question of the Other." Twilight Zone Seminar, Division of Social Science, Hong Kong University of Science and Technology, February 14, 1996.
70. "Fourth Sector Science: Non-Governmental Research Organizations in Kerala." Joint Meetings of the Society for the Social Studies of Science, and the Society for the History of Technology, October, 18-22, 1995, Charlottesville, Virginia.
71. "Environment and Development: A Normative Appraisal of Sustainable Development." Workshop on Environmental Studies and Science Studies, Department of Science & Technology Studies, Cornell University, April 15- 17, 1994.
72. "Technology and Socio-Cultural Processes: A World Systems Approach." Annual Meetings of the Society for the Social Studies of Science, New Orleans, October 1994.
73. "Technological Change in Agriculture in Developing Countries." Institute for Social Investigations, Universidad Nacional Autonoma de Mexico (UNAM), Mexico City, February 24, 1994.
74. "Sustainable Development and Population Issues." Invited Commentator, Conference on Global Environmental Change and Social Justice, Peace Studies Program, Cornell University, September 12, 1993.
75. "Interpretive Flexibility and Global Environmental Change: Implications for Public Policy" Center for Energy and Urban Policy Research, University of Delaware, May 7, 1992.
76. "Conceptualizing Technological Change: The Green Revolution in India." Departments of Administrative Sciences, and Science-Technology Studies, Colby College, Waterville, Maine, February 27, 1992.
77. "Technological Change as a Problem-Solving Activity." Department of Science, Technology and Society, New Jersey Institute of Technology, Newark, New Jersey, February 25, 1992.
78. "In Search of a Practically-Reflexive Category for Analyzing Technological Change." Annual Conference of the Society for the Social Studies of Science, November 1991, Cambridge, MA.
79. "Technology as Knowledge and the Social Context of Technology." Faculty Seminar in Science and Technology in Context, Illinois Institute of Technology, Chicago, September 25, 1991.
80. "The Cognitive Turn in the History of Technology: In Search of Social and Cultural Contexts." Culture-Science-Technology Program, University of Arizona, Tucson, Arizona, April 10, 1991.
81. "Technology Transfer in the Green Revolution." Annual Meetings of the Society for the History of Technology, Cleveland, Ohio, October 1990.
82. "Appropriate Technology: A Review of the Movement and its Conceptualization of Contemporary Technology." Research Seminar, Center for the Study of Science in Society, Virginia Tech, Blacksburg, Virginia, September 6, 1989.
83. "Mobilizing the Public in Technology Policy Debates: The Case of Kerala Science Literacy Society." Annual Meetings of the Society for the Social Studies of Science, Irvine, California, November 18, 1989.

POSTDOCTORAL FELLOWS SUPERVISED

- Sally Geislar (PhD, University of California, Irvine)
- Gareth Haslam (PhD, University of Cambridge, UK)

- Ademola Adenle (PhD, Nottingham University, UK)
- Joni Jupesta (PhD, Tohoku University, Japan)
- Sulayman Sowe (PhD, Aristotle University, Greece)
- Aki Suwa (PhD, University College London, UK)
- Raquel Moreno-Penaranda (PhD, University of California, Berkeley)
- Christopher Doll (PhD, University College London, UK)
- Rasmus Bertelsen (PhD, University of Cambridge, UK)
- Jayan Jose Thomas (PhD, IGDIR, Mumbai, India)

GRADUATE STUDENT SUPERVISION & EXTERNAL EXAMINER

1. PhD Defense Committee Chair and Committee Member of Nicholas Dovellos, "Sweeping the Field: Fromm Death back to Life," Department of Philosophy, University of South Florida, June 2020.
2. PhD Defense Committee Chair of Zachary Vereb, "A Defense and Application of a Kantian Approach to Environmental Ethics," Department of Philosophy, University of South Florida, May 2019.
3. PhD examination & evaluation committee chair of Brian Portelli, "Foreign Direct Investment, Multinational Enterprises and Industrial Development: Backward Linkages and Knowledge Transfer in Tanzania," Centre for Technology, Innovation and Culture, University of Oslo, December 2005.
4. PhD examination committee chair of Arne Fevolden, "Innovation and Capacity Utilisation in the Information and Communications Industries," University of Oslo, Centre for Technology, innovation and Culture, November 2007.
5. PhD committee member of Lisa Lai-Ming Wong, "Framings of Cultural Identities," Division of Humanities, Hong Kong University of Science and Technology, January 1999.
6. PhD examination and evaluation committee chair of Marisa D'Mello, "Understanding Selves and Identities of Information Technology Professionals: A Case Study from India," Centre for Technology, Innovation and Culture, University of Oslo, Sep 2006.
7. PhD examination and evaluation committee chair of Jyotsna Sahay, "Understanding Organizational Implementation of GIS: Case Study of a Public Sector Agency in Bangalore, India," Centre for Technology, Innovation and Culture & Institute of Informatics, University of Oslo, December 2006.
8. PhD external examiner of M.V.S. Aparna, "Actor-Networks in Technology Development," Department of Sociology, School of Social Science, University of Hyderabad, India, August 1996
9. MPhil external examiner of Petti Pang, "The Image of Physics and Physicists in Modern Drama: Portraits and Social Implications," Department of Physics, History & Philosophy of Science Group, University of Hong Kong, Oct 2000.
10. MPhil external examiner of Sundararajan R. Iyer, "Social Development in Kerala, India: Illusion or Reality?" Faculty of Social Sciences, University of Hong Kong, December 1996
11. MPhil thesis examination committee chair of Wong Kin Wai, Anthony, "Dilemmas of Gender: A Discourse Analysis" Division of Social Science, Hong Kong University of Science and Technology, June 1997
12. MPhil thesis examination committee chair and member of thesis committee of Mitsumori Shiro, "Adoption of Mobile Communication Standards: A Comparative Study of China, Japan, South Korea and Hong Kong," Division of Social Science, Hong Kong University of Science and Technology, May 1997

13. MPhil thesis examination committee chair of Leung Wai Sze, "Jurgen Habermas' Communicative Theory," Division of Humanities, Hong Kong University of Science and Technology, September 1997.
14. MA supervisor of Arjen Mink, "Disruptive Technology and New Business. Opportunities for Environmental Management," European Studies on Society, Science & Technology, University of Oslo and Lund University (August 2007)
15. MA supervisor of Christopher Bach, "The Social Construction of Software: Innovations in Open Source Software Communities," European Studies on Society, Science & Technology, University of Oslo and University of Maastricht, August 2007.
16. MA supervisor of Sébastien Chaoulli, "Technological Change and Transition to Sustainable Energy Regime in India," European Studies on Society, Science & Technology, University of Oslo, Norway and University of Maastricht, the Netherlands, October 2006.
17. MA supervisor of Elisabeth Lokshall, "Climate Change and Technology in a Globalizing World: A Study on How Clean Development Mechanism Facilitates the Introduction of Climate Friendly Technology in Africa," Centre for Technology, Innovation and Culture, University of Oslo, May 2006.
18. MA supervisor of Carl Henrik Knutsen, "Political Regime Types and Economic Growth: Are Democracies Better at Increasing Prosperity?" Department of Political Science, University of Oslo, May 2006
19. MA thesis external examiner of Lotte Van Boxem, "Measuring Globalization – Opening the Blackbox: A Critical Analysis of Globalization Indices," University of Maastricht, October 2006.
20. MA thesis external examiner of Ana Kacarska, "Learning to destroy: VoIPs versus traditional telephony," Lund University, November 2006
21. MA supervisor of Berna Beyhan, "Consuming Innovations: A Case Study on the Domestication of Internet Banking in Turkey," Globalization, Innovation and Policy and European Studies of Society, Science and Technology, University of Oslo & Istanbul Technical University, November 2005.
22. MA supervisor of Esra Ozakan, "Global Sweatshop Chains: The Case of Turkish Apparel Sector," Globalization, Innovation and Policy and European Studies of Society, Science and Technology, University of Oslo & Istanbul Technical University, November 2005
23. MA thesis supervisor of Louisa H. Soon, "Entrepreneurial Universities in a Knowledge-Based Economy: The Case of National University of Singapore," Department of Information and Communications Management, National University of Singapore, December 2004
24. MA external examiner of Lim Alwyn Ye-Yohn, "Advancement through Technology: The Culture of Singapore's Technological Development," Department of Sociology, National University of Singapore, March 2003

ADMINISTRATIVE & ACADEMIC SERVICE

- Dean, Patel College of Global Sustainability, University of South Florida, Tampa, Florida (2017-ongoing).
- Vice-Rector, United Nations University, Tokyo, Japan (2008-2014).
- Director, United Nations University Institute of Advanced Studies, Japan (2009-2013).
- Chair, Central Review Board, United Nations University (2008-2013).

- Member, International Advisory Board, Contemporary China Research Center, Fudan Institute for the Advanced Study of Social Science, Shanghai, China (2012-2014)
- Member, Advisory Group on Knowledge and Innovation for Inclusive Growth, OECD Division of Science, Technology and Industry, Paris (2012- 2014).
- Member, Ex-Officio, International Advisory Board, Institute of Advanced Studies, United Nations University, Japan (2009-2013).
- Member, Board of Trustees, Institute for Global Environmental Strategies, Japan (2009-2012).
- Member, Advisory Board, Institute for Ethics, Governance and Law, Griffiths University, Australia (2009-2010).
- Director of Research, Center for Technology, Innovation and Culture, University of Oslo (2005-2007).
- 2005-2007: Director of Graduate Studies, Centre for Technology, Innovation and Culture, University of Oslo.
- 2004-2008: Steering Committee Member, Oslo International Summer School in the Social Sciences, University of Oslo.
- 2001-2004: Head, Department of Information and Communications Management, National University of Singapore.
- 1998-2000: Member, Senate Committee on Graduate Education, Hong Kong University of Science and Technology (elected member).

JOURNAL & BOOK MANUSCRIPTS REFEREED:

World Development; Social Studies of Science; California Management Review; Research Policy; International Journal of Biotechnology; Telecommunication Policy; New Media and Society; Social Epistemology; Technology and Culture; Science as Culture; South Asia; Critical Asian Studies; The Information Society; Agricultural History; Taylor & Francis; Palgrave Macmillan; Anthem Press; UNU Press.

EDITORIAL BOARD MEMBER/ADVISORY BOARD MEMBER:

Innovation and Development; Asian Journal of Biotechnology and Development; Sustainability Science; Science, Technology and Society; Anthem Press; UNU Press

GRANT REFEREE:

National Science Foundation; Norwegian Research Council; United Nations; Canada Research Council.

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