



T S Gopi Rethinaraj

Contact Details

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Current Position

January 2015-Present

Academic Head & Chairman of PhD Programme, National Institute of Advanced Studies (NIAS), Bengaluru, INDIA

June 2014-Present

Associate Professor, Energy and Environmental Policy Programme, School of Natural and Engineering Sciences, National Institute of Advanced Studies (NIAS), Bengaluru, INDIA

Areas of Specialization

Energy and Climate Policy; Science and Technology Policy; Computer Simulation and Quantitative Methods for Public Policy; Science Communication; Civilian and Military Uses of Nuclear Energy; Nuclear Arms Control and International Security

Education

2005 PhD in Nuclear Engineering, University of Illinois at Urbana-Champaign, USA

1995 MSc in Physics, Bharathidasan University, Tiruchirapalli, India

1993 BSc in Physics, Bharathidasan University, Tiruchirapalli, India

Past Work Experience

July 2005-June 2014 [9 years full time]

Assistant Professor of Public Policy, Lee Kuan Yew School of Public Policy, National University of Singapore, Singapore

1999-2005 [6 years part time]

- Teaching Assistant, Department of Nuclear, Plasma, and Radiological Engineering & Department of Physics, *University of Illinois at Urbana-Champaign*, USA
- Research Assistant, Program in Arms Control, Disarmament, and International Security, *University of Illinois at Urbana-Champaign*, USA

1995-1999 [4 years full time]

Science Reporter, *Indian Express*, Mumbai, India

Honours and Fellowships

Summer 2009

Visiting Scholar, Kennedy School of Government, Harvard University, USA

Summer 2007

Visiting Associate Professor, Graduate School of Public Policy, University of Tokyo, Japan

Summer 2006

Visiting Fellow, American Association for the Advancement of Science, USA

Spring 1999

Visiting Fellow, Bulletin of the Atomic Scientists, Chicago, USA

1999

Investigative Journalism Award, Mumbai Journalists' Association, India

Articles and Book Chapters

1. India's Nuclear Weaponisation: Warheads, Delivery Systems, and Doctrinal Compatibility in "India's Military Modernisation" Edited by Rajesh Basu and Bharath Gopalaswamy. Oxford University Press. 2015. pp 67-88.
2. How China's Options Will Determine Global Warming (with Clifford Singer and Timothy Milligan). *Challenges* Vol. 5, pp. 1-25. 2014
3. Fukushima and Thereafter: Reassessment of Risks of Nuclear Power (with T.N. Srinivasan). *Energy Policy*. January 2013
4. Nuclear power and the environment: Risk vs. Perception. Book Chapter, *Nuclear Power and Energy Security in Asia*, Routledge, June 2012

5. Fissile Material Cut-off Treaty (FMCT): Revisiting Indian and Pakistani Options, *Swords and Plough Shares*, Fall 2010
6. Probability distributions for carbon emissions and atmospheric response, *Climatic Change*, Vol: 88, No. 3-4, 2008 (with Clifford Singer et al)
7. China's energy and regional security perspectives, *Defense and Security Analysis*, December 2003
8. Threats and perception of nuclear war in South Asia, *Swords and Plough Shares*, Summer 2002
9. In the comfort of secrecy, *Bulletin of the Atomic Scientists*, November/December 1999
10. Bang or whimper? Reconsidering India's nuclear capabilities, *Jane's intelligence Review*, December 2009
11. US-India nuclear deal: regional security implications for Asia, *Jane's Intelligence Review*, January 2007
12. Asia looks to nuclear power for energy security, *Jane's Intelligence Review*, November 2003
13. Nuclear diplomacy returns to South Asian security agenda, *Jane's Intelligence Review*, May 2002
14. Energy Wars: Past, Present and Future, *Jane's Intelligence Review*, June 2001 (with Clifford Singer)
15. Going Global: India aims for a credible nuclear doctrine, *Jane's Intelligence Review*, February 2001 (with Clifford Singer)
16. Indian blasts surprise the world, but leaves fresh doubts, *Jane's Intelligence Review*, July 1998
17. Tritium breakthrough brings India closer to H-bomb arsenal, *Jane's Intelligence Review*, January 1998

Books, Monographs, and Special Reports

1. Rethinaraj, T.S. Gopi and Singer, Clifford E., *Historical Energy Statistics: Global, Regional, and National Trends Since Industrialization*, Energy and Resource Economics Series, Singapore: World Scientific Publishing Company (Book Manuscript Contract)
2. Rethinaraj, T.S. Gopi. Modeling Global and Regional Energy Futures. ACDIS Research Report series, University of Illinois at Urbana-Champaign, November 2005
3. Rethinaraj, T.S. Gopi and Moorthy, D.N., *South Asia's Nuclear Politics*, London: Jane's Information Group, 1998

Teaching Experience

1. 2005-2014: Developed and taught the following courses (core and elective) at the Lee Kuan Yew School of Public Policy, National University of Singapore: National Science and Technology Policy Analysis; WMD Proliferation and International Security; Energy Systems and Climate Policy; Energy Security and Policy in Asia; Empirical Analysis for Public Policy; Dynamic Modeling of Public Policy Systems; Policy Analysis Exercise (PAE)
2. From 2014: As the PhD Chairman and Academic Head of NIAS, responsibilities include coordinating the teaching of two mandatory courses (Foundations Course and Research Methodology Course), teaching core course for energy and environment policy students; and overall student and academic affairs.

Working Papers

1. Kudankulam in Fukushima Context: Analysis of the Engineering Safety System of Russian-Supplied VVERs for India (with Abhilash Nair)
2. India's Nuclear Energy Development: A Reassessment (with T.N. Srinivasan)

Current and Completed Projects

1. Coordinator of the Specialists Group on "Low Energy Nuclear Reactions (LENR): A Way Ahead for India" funded by the Indian Ministry of New and Renewable Energy [Ongoing]
2. Coordinator for two fund raising initiatives "DAE-NIAS Research and Education Partnership" and "School for Energy and Environment" [Ongoing]
3. Siting of Nuclear Power Reactors in Singapore (Co-PI with Andrew Palmer of NUS Civil Engineering Department. Funding Source: NUS Tier-2 Competitive Grant. Amount: S\$180,000 over three years [2010-2013, Completed])
4. Science Engagement in South Asia: Planning Phase (Principal Investigator). Funding Source: Sloan Foundation. USA. Amount: US\$100,000 for one year. [2012-2013, Completed]
5. Asian Trends Monitoring Project (one of the three Principal Investigators). Funding Source: Rockefeller Foundation, USA. Amount: US\$150,000 over two years [2011-2012, Completed]

Consulting Assignments

1. Since 2009: Technical expert for the International Atomic Energy Agency (IAEA) consultancy group to review and develop computer simulation tools for nuclear fuel cycle analysis in support of policy analysis by member states.

2. 2006-2013: Regularly taught in executive education programs for various government agencies in Southeast Asia in the areas of energy security and energy systems analysis, science and technology policy, and reforms in the electricity market.

3. Jane's Chemical, Biological, Radiological and Nuclear Assessments, London: Jane's Information Group, 2007-2008

4. Nuclear Power Prospects in Southeast Asia, Seattle: National Bureau of Asian Research, 2006

Newspaper/Newsmagazine Articles

1. Solar Power and Energy Security. *Pragati: The Indian National Interest Review*, November 2013 (with Mukul Asher and Murali Ramakrishnan)
2. Winds of Change. *Pragati: The Indian National Interest Review*, September 2013 (with Mukul Asher)
3. Security India's Electricity Supply. *Pragati: The Indian National Interest Review*, May 2012 (with Karthik Ganesan)
4. How Fukushima is relevant to Kudankulam, *The Hindu*, March 8, 2012 (with T.N. Srinivasan and Surya Sethi)
5. Options in Sri Lanka, *Pragati: The Indian National Interest Review*, April 2008
6. In defence of the deal, *Pragati: The Indian National Interest Review*, September 2007
7. Indo-US Nuclear Deal and Southeast Asia, *The Straits Times*, October 2007
8. Several news reports and analysis for *The Indian Express* and *Reuters* from 1995-1999

Conference and Invited Talks (Select List)

1. Nuclear Regulation in India. University of Tokyo, Japan, February 2013
2. Impact of Fukushima on India, China, and ASEAN, University of Tokyo, Japan, March 2, 2012
3. Nuclear Safety and Regulation in Southeast Asia, CSIS, Jakarta, Indonesia, September 2007
4. Asian Energy Security and Environmental Protection, Industry Seminar, University of Tokyo, Japan, July 2007
5. Nuclear Proliferation in Asia: Implications for Future Regional Security, United Nations Association of Singapore, May 2007
6. Nuclear Energy Futures, Woodrow Wilson School, Princeton University, June 2006
7. U.S.-India Relations, U.S. Department of State, Washington, D.C., June 2006
8. U.S.-India Nuclear Deal, U.S. Congressional Research Service, Washington, D.C., June 2006

9. Energy future and sustainability, International Conference on Global Sustainability and Regional Diversity, Bangkok, Thailand, March 2006
10. Future of civilian nuclear industry and proliferation concerns in Asia, 15th International Symposium on Science and World Affairs, Moscow, Russia, July 2003
11. Energy Security and International Conflict, 13th International Symposium on Science and World Affairs, Berlin, Germany, July 2001
12. Analysis of Indian Navy's budget, Brookings Institution, March 2000

Academic References

1. T.N. Srinivasan

Samuel C. Park, Jr. Professor Emeritus of Economics, Yale University
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Stanford Center for International Development (SCID)
John A. and Cynthia Fry Gunn Building, 366 Galvez Street
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2. Clifford E. Singer

Professor of Nuclear Engineering & Professor of Political Science
MAILING ADDRESS:
University of Illinois at Urbana-Champaign
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Phone: 1-217-333-1814 (Office); 1-217-344-3252 (Residence)
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3. Mukul G. Asher

Professorial Fellow of Public Policy
MAILING ADDRESS:
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4. Ramkishan S. Rajan

Professor of International Economic Policy
MAILING ADDRESS:
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