

Prof. (Dr) Sujit Bhattacharya



Chief Scientist (CSIR-NISTADS)
Professor Academy of Scientific & Innovative Research (AcSIR)
Editor-in-Chief (Journal of Scientometric Research)
Indexed by Scopus, ESCI (Web-of-Science) and Dimensions
Date of Birth: 22-02-65
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Journal: www.jscires.org; [twitter: @jscires](#)

Academic Qualification:

PhD “Mapping the Cognitive Structure of a Research Specialty: A Case Study of Condensed Matter Physics” (Indian Institute of Technology- Delhi)

MSc (Physics) (Delhi University)

Professional Qualification:

Associateship in Information Science (CSIR),

Post-Graduate Diploma in Computer Applications (NITIE, Bombay)

Broad Area (Specialization)

Science, Technology and Innovation Policy Studies; Scientometrics; Intellectual Property Rights

Professional Experience

- Twenty six years as Scientist at CSIR-NISTADS
Currently serving as Chief Scientist.
Professor in the Academy of Scientific and Innovative Research (AcSIR)
- Two years as ‘Professor’ at the Centre for Studies in Science Policy (Jawaharlal Nehru University)

Editorial Board/Editor in Journals

- Editor-in-Chief of the *Journal of Scientometric Research* (Indexed by Scopus, ESCI and Dimensions)
- Editorial Board member of *Journal of Bibliometrics in Business and Management* (Inderscience)
- Editorial Board member of *Asian Journal of Innovation and Policy*
- Editorial Board member of *COLLNET Journal of Scientometrics & Information Management* (Taylor & Francis)
- Advisory Board of the journal *Academia*
- Editorial Board member of *ISSI Newsletter* (Newsletter of the International Society of Scientometrics and Informetrics)

Award/Membership.

Member National Academic Advisory Committee (NAAC), Indian Social Science Congress.

Member Board of Studies for Centre for Science, Technology and Innovation Policy, Central University Gujarat

Visiting Professor (Full Time) in Centre for Studies in Science Policy (Jawaharlal Nehru University) from 2007-2009.

Editorial Board of reputed international journals

Member of Governing Body of Deen Dayal Upadhyay College (University of Delhi), 2009-2010, Dr Ambedkar College, Delhi University 2014-2016

Principal Investigator of International Network COLLNET (Collaboration Network in Science and Technology)

Core Committee and program committee members of various national and international conferences, academic committee, etc

Scholarships received from Germany (DFG-INSA), Sweden, Israel, Netherlands and Int'l Foundations for International programs and workshops, etc

External thesis examiner of University of Malaysia, University of Hyderabad (India), Jawaharlal Nehru University (India), IGNOU- IPR Centre, Central University-Gujrat (India), Kerala University, AcSIR

Academic Achievement

- Published over eighty research papers in peer reviewed journals and conference proceedings.
- Have some highly influential papers as per citation attractiveness. Among the highest cited author in google citation score in science-technology-innovation studies. Research gate score of 25 and *h* index of 17 (as among the top in field weighted citation influence)
- Editorial Board Member of Four International Journal and an International Newsletter
- Core committee Member of Asian Society for Innovation and Policy, COLLNET IndiaLICS, Knowledge Forum and Society for Information Science

- Undertaken sponsored research for major government bodies (Office of the Principal Scientific Advisor, Govt. of India; Department of Science & Technology, etc).
- Presented papers at important international meetings (Global Ministerial Forum, Geneva Forum, etc).
- Developed and taught a course on “Intellectual Property” for MPhil/PhD students of Jawaharlal Nehru University. Developed and teaching PhD level course on Science, Technology and Innovation Policy and Intellectual Property in the context of Research, Innovation and Development for AcSIR
- Some of my work has received high citations and has been covered in national and international newspapers (for example Financial Times, London).
- Have reviewed proposals for projects, book proposals, involved in peer-review for many journals and international projects.
- Frequently involved in providing inputs to newspapers, and discussion on issues of government S&T policies. Presented the analysis of science budget in Indian National News Network in 2010, etc.

Research Outputs

Books

- Policy Perspective on Innovation and Sustainable Development. *Edited by Sujit Bhattacharya, Yogesh Suman and Tabassum Jamal (2017). Syahi Publication House, New Delhi.*
- Co-Editor of India Science Report, Volume III. Published by *Cambridge University Press: New Delhi. 2015*
- CEFIPRA 25 Years: Strengthen Scientific Competence & Enable Industrial Competitiveness of Indo-French S&T Ecosystem. Published by *CEFIPRA (Indo-French Centre for Promotion of Advanced Research): New Delhi. 2014. Principal Author*
- Co-Editor of India Science Report, Volume II. Published by Cambridge University Press. New Delhi 2013
- Bhattacharya, Sujit (Principal author); Garg, K. C.; Sharma, S. C.; Dutt, Bharvi (2006) Indian Patenting Activity in International and Domestic Patent System: Contemporary Scenario. *Nistads: New Delhi. (ISBN: 81-85121-34-6).* (This is outcome of the work undertaken for the Office of the Principal Scientific Advisor, Govt. of India)
- Co-Edited Emerging Trends in Scientometrics, *Allied Publishers Ltd. New Delhi. 1999.*
- Banerjee, P. and Bhattacharya, S. (1996). *Advanced Telecommunications in India: Regulation and Strategy. Har-Anand publications, New Delhi.*

Reports

- *Nanotechnology Research and Innovation for Development: Status and Prospect in India* (Report prepared under XII plan project, Govt. of India) [Project Leader and Principal Author] 2017.
- *Knowledge Creation and Innovation in an Emerging Technology: Contemporary and Future Scenario in Nanotechnology*. Prepared for Department of Science and Technology—NSTMIS (Government of India). December, 2012. (Principal Investigator and lead author).
- *A comparative Study on S&T, Innovation and Development Strategies of China and Korea vis-à-vis India*, project undertaken for the Office of the Principal Scientific Advisor, Government of India (Co-Investigator)
- *Bhattacharya, S. (Project Leader), Sharma, S.C. and Lal, K. Interim Report on Study of R&D and Innovation Activity of Firms in India*. Prepared for Department of Science and Technology-NSTMIS (Government of India), New Delhi, 2007.
- *Report on Status of Innovation: Indian Automotive Industry*. Prepared for Department of Science and Technology –NSTMIS (Government of India), New Delhi, March, 2006. (Team Member)
- Banerjee, P., Bhattacharya, S. *A Study on Strategies for the Development of an Integrated Information Market*. DSIR Sponsored Project (Government of India), 1996.
- Nagpaul, P., Bhattacharya, S. *Beyond Institutional Boundaries: A study of collaborative linkages in Indian Science through Bibliometric Indicators*. DSIR Sponsored project (Government of India), 1996.

Research Papers

- Bhattacharya, S., Kumar, R. and Singh, S (2020). Capturing the Salient Aspects of IoT Research. *Forthcoming in Scientometrics*. Online First link <https://doi.org/10.1007/s11192-020-03620-4>
- Aggarwal, R., Bhattacharya, S., & Singh, S. (2020). Mapping the Global Research and Clinical Trials in COVID-19. MedRxiv
doi: https://doi.org/10.1101/2020.06.27.20141788Abstract (submitted in Journal)
- Sujit Bhattacharya and Shubham Singh (2020). Visible Insights of the Invisible Pandemic: A scientometrics, altmetric and topic trend analysis. As preprint available in *arXiv.org/abs/2004.10878* (submitted in journal)
- Rana, S., Singh, S and Bhattacharya, S. (submitted). What is the Impact of India's Plant Variety Protection Act? An analytical examination based on registrations under this act. Submitted to *Journal of Intellectual Property Rights* (corresponding author)
- Singh, P, Singh V.K., Arora, P. and Bhattacharya S. (2020) India's Rank and Proportionate Share in the Global Research Output - Part 1: how data sourced from different databases can produce different outcomes? *arXiv:2007.05917*. <http://arxiv.org/abs/2007.05917> (Submitted in Journal)

- Singh V.K., Arora, P., Uddin, A. and Bhattacharya, S. (2020) India's Rank and Proportionate Share in the Global Research Output - part 2: how publication counting method and subject selection can vary the outcomes? arXIV:2007.05919. <http://arxiv.org/abs/2007.05919> (Submitted in Journal)
- Bhattacharya, S. (2020) Science and Innovation Design in the 21st Century: New Paradigms and Challenges for Policy, *Current Science*, 18 (3), 348-349
- Bhattacharya, S. (2019). Some Salient Aspects of Machine Learning Research: A Bibliometric Analysis, *Journal of Scientometric Research*, 8(2s);85-92
- Kanujia, A. and Bhattacharya, S. (2018) "The GM crop debate in India: Stakeholders interests, perceptions, Trust and Public Policy", *Asian Biotechnology Development Review*. 20(1&2).
- Bhattacharya, S. (2018) Eugene Garfield: Brief Reflections (2018) *Scientometrics* 114(2) pp. 401-407 .
- Shilpa and Bhattacharya, S (2017) Indo-French cooperation in water sciences: capturing research dynamics through co-authorship analysis. *Current Science* 113(9):1668-1674.
- Bhattacharya, S. and Shilpa (2016) Capturing the Growth Dynamics of Science: A Publication based Analysis. *Current Science* 110 (8), pp. 1429-1425.
- Bhattacharya, S., Shilpa, Kaul, A. (2015). Emerging Countries Assertion in the Global Publication Landscape of Science: A Case Study of India. *Scientometrics*, 103(2): 387-411. <http://link.springer.com/article/10.1007%2Fs11192-015-1551-4>
- Bhattacharya, S., Kaul, A., Shilpa, Sharma, P. (2014). Role of Bilateral Institution in Influencing Collaboration: Case Study of CEFIPRA- A Bilateral S&T Institution Established by India and France. *Scientometrics*, 102 (1): 169-194.
- Shrivats, S. V., Bhattacharya, S. (2014). Forecasting the trend of international scientific collaboration. *Scientometrics*, 101 (3): 1941-1954.
- Koen, B., Bhattacharya, S. (2013). Emerging technologies in India: Developments, debates and silences about nanotechnology. *Science and Public Policy*, 40 (5): 628-643.
- Bhattacharya, S., Shilpa, Bhati, M. (2012). China and India: The Two New Players in the Nanotechnology Race. *Scientometrics*, 93(1): 59-87.
- Krishna, V.V., Patra, S.W., Bhattacharya, S. (2012). Internationalisation of R&D and global nature of innovation: Emerging trends in India. *Science, Technology & Society*, 17(2): 165-199.
- Bhattacharya, S., Shilpa. (2012). China Moving Ahead in the Global Nanotechnology Race: Evidences from Scientometric Study. *COLLNET Journal of Scientometrics & Information Management*, 6(1)
- Das, A., Arora, P. and Bhattacharya, S. (2012). Webliography of STI indicator databases and related publications. *Journal of Scientometric Research*, 1(1): 86-93.

- Jayanthi, A.P., Bhatti, M, Bhattacharya, S. (2012). Nanotechnology: Risk, and Governance in India. *Economic & Political Weekly*, 47(3): 34-40.
- Bhattacharya, S. (2012). Editorial. *Journal of Scientometric Research*, 1 (1): 1-2.
- Nath, P., Bhattacharya, S. (2011). Export Structure, Technological Capability and Comparative Performance of India and China in US Market. *Sociology of Science and Technology*, 2(1): 62-74.
- Bhattacharya, S., Lal, K. (2011). Transition of Indian firms in the liberalization and globalisation era. *Asia-Pacific Tech Monitor*, 43-51.
- Bhattacharya, S., Bhati, M. (2011). China's Emergence as a Global Nanotech Player: Lessons for Countries in Transition. *China Report*, 47 (4): 244-262.
- Bhattacharya, S., Shilpa (2011). Mapping Nanotechnology Research and Innovation in India. *Journal of Library & Information Technology*, 31(5): 349-358.
- Bhattacharya, S., Jayanthi, A.P. (2011). Research and Innovation for Drug Development in Neglected Diseases: A case study of India'. *African Journal of Science, Technology, Innovation and Development*. 30(1): 236-258.
- Das, A., Arora, P. and Bhattacharya, S. (2012). Webliography of STI indicator databases and related publications. *Journal of Scientometric Research*, 1(1): 86-93.
- Bhattacharya, S., Patra, S. (2010). Assessing Competency of a Developing Country in High Technology?: A Case Study based on Indian Patenting Activity in the Biotechnology Sector. *COLLNET Journal of Scientometrics and Information Management*, 4(2): 21-34.
- Kostoff, RN., Bhattacharya, S. (2010). Identification of Military-related Science and Technology. *Defence Science Journal*, 60(3): 259-270.
- Bhattacharya, S., Garg, K. C., Sharma, S. C., Dutt, Bharvi. (2007) Indian Patenting Activity in International and Domestic Patent System: Contemporary Scenario. *Current Science*, 92(10): 1366-1369.
- Kostoff, RNK., Briggs, M.B., Rushenberg, R.L., Bowles, C.A., Bhattacharya, S, Johnson, D., Icenhour, A.S., Nikodym, K., Barth, R.B., Dodbele, S., Pecht, M. (2007). Assessment of China's And India's Science and Technology Literature As Reflected in The SCI/SSCI. *Current Science*, 93(8): 1088-1092.
- Bhattacharya, S. (2007) Patenting in Biotechnology. Special Issue on Intellectual Property Rights. *DESIDOC Bulletin of Information Technology*, 27(6): 31-40.
- Bhattacharya, S., Arora, P. (2007). External Linkages in Indian Universities: What they reveal and what they imply? *Scientometrics*, 70(2): 277-300.
- Bhattacharya, S, (2007). Delineating the patent data: A case study of prolific patenting institutions of India and China. Special Issue on Measurement- *DESIDOC Bulletin of Information Technology*, 27(1), 87-95.
- Kostoff, R.N K., Bhattacharya, S., Pecht, M. (2007). Assessment of China's and India's Science and Technology Literature – Introduction, Background, and

- Approach (2007). *Technological Forecasting and Social Change*, 74(9): 1519-1538.
- Kostoff, R.N.K., Johnson, D., Bowles, C.A., Bhattacharya, S., Icenhour, A.S., Nikodym, K., Barth, R.B., Dodbele, S, (2007) Assessment of India's Research Literature. *Technological Forecasting and Social Change*, 74(9): 1574-1608.
 - Kostoff, R.N.K., Briggs, M.B., Rushenberg, R.L., Bowles, C.A., Pecht, M., Johnson, D., Bhattacharya, S., Icenhour, A.S., Nikodym, K., Barth, R.B., Dodbele, S. (2007). Comparisons of the Structure and Infrastructure of Chinese and Indian Science and Technology. *Technological Forecasting and Social Change*, 74(9): 1609-1630.
 - Bhattacharya, S. (2004). Implications for Indian pharmaceutical sector in the new WTO regime. *Medicinal Chemistry Research*, 13(6/7): 369-389.
 - Martin, M., Bhattacharya, S. (2004). Commonalities and differences between scholarly and technological collaboration, *Scientometrics*, 61(3): 443-456.
 - Bhattacharya, S. (2004). Mapping inventive activity and technological change through patent analysis: A case study of India and China, *Scientometrics*, 61(3): 361-381.
 - Gupta, B.M., Bhattacharya, S. (2004). A Bibliographic Approach towards Mapping of Science. *DESIDOC Bulletin of Information Technology*, 24: 3-8.
 - Bhattacharya, S., Martin, M. (2003). Large firms and the Science/technology interface- Patents, patent citations, and scientific output of multinational corporations in thin films, *Scientometrics*, 58(2): 265-279.
 - Bhattacharya, S., Hildrun K., Martin, M. (2003). Characterizing Intellectual spaces between science and technology, *Scientometrics*, 58(2): 369-390.
 - Bhattacharya, S., Nath, P. (2002). Using patent statistics as a measure of 'technological assertiveness': A China-India comparison, *Current Science*, 83(1).
 - Bhattacharya, S., Moh'D T.R. Khan. (2001). Monitoring Technology Trends through Patent Analysis: A Case Study of Thin Film, *Research Evaluation*, 10: 25-37.
 - Bhattacharya, S. (2001). Using the Macro, Meso and Micro Level Science Indicators to Map a Research Area. *Journal of library and Information Science*, 26(2).
 - Bhattacharya, S and Prajit Basu (1998)"Mapping research at the micro level using co-word analysis", *Scintometrics*, 43(3).
 - Bhattacharya, S. (1997) "Tracking Changes in Research Priorities of Physics: A Macro Level Analysis" *Scientometrics*, 40(1), 1997.
 - Bhattacharya, S. (1997) "Cross-National Comparison of Frontier Areas of Research in Physics using Bibliometric Indicators" *Scientometrics*, Vol.40, No. 3.

- Bhattacharya, Sujit (1996) “World Structure of Physics: A Cross-National Comparison” *JISSI-The International Journal of Scientometrics and Informetrics*, 2(1).

Book Chapters

- Kanaujia, A. and Bhattacharya, S. (forthcoming in Springer Nature) “On governance and regulation of Genetically Modified (GM) crops in India” In: *Indian Agriculture under the shadow of WTO and FTAs: Issues and Concerns*, Rajan Sudesh Ratna, Sachin Kumar Sharma, Radika Kumar, Adeet Dobhal (Ed.)
- Kanaujia, A. and Bhattacharya, S. (forthcoming) Issue of innovation and Regulation: The Case of Genetically Modified (GM) Crop in India (forthcoming) In: *Volume on Innovations, Knowledge Accumulation and Development in the Era of Fourth industrial Revolution*, Lakhwinder Singh (Ed.)
- Bhattacharya S. and Jyoti S. (2017). Marker Assisted Selection: Can it provide new opportunities for crop improvement? In: *Policy Perspective on Innovation and Sustainable development*, Sujit Bhattacharya, Yogesh Suman and Tabassum Jamal (Ed.) Syahi Publication House: New Delhi
- Bhattacharya S. and Jyoti S. (2017). Protecting Traditional Artifact for Socio-Economic Sustenance: Case Study of Gamosa, A traditional handicraft of Assam. In: *Policy Perspective on Innovation and Sustainable development*, Sujit Bhattacharya, Yogesh Suman and Tabassum Jamal (Ed.) Syahi Publication House: New Delhi
- Bhattacharya, S. (2016) *Scientometrics and its Institutionalization: The Role of Andras Schubert* In: *Special volume of the e-zine of the international society of scientometrics and informetrics vol. 12–S Festschrift series of the International Society for Scientometrics and Informetrics (ISSI) in conjunction with and supported by Springer (edited Wolfgang Glanzel and Balázs Schlemmer). Published by ISSI*
- Bhattacharya, S. (2015). ‘Governance and Regulation in an Emerging Technology: Nanotechnology as a Case Study’ In: *India Science and Technology Volume 3* (ed: Banerjee, P., Bhattacharya, S., Kumar, V., Mandal, K., Mehra, K., Pohit, S., Raina, R.S., Suman, S.). *Cambridge University Press: New Delhi*, pp. 215-218
- Rao, T.N.V.V., Bhattacharya, S. (2015). ‘Drinking Water Related Standards: Contemporary Scenario’ In: *India Science and Technology Volume 3* (ed: Banerjee, P., Bhattacharya, S., Kumar, V., Mandal, K., Mehra, K., Pohit, S., Raina, R.S., Suman, S.). *Cambridge University Press: New Delhi*, pp. 346-348.
- Bhattacharya, S. (2015). ‘Nanotechnology Standard Development’ In: *India Science and Technology Volume 3* (ed: Banerjee, P., Bhattacharya, S., Kumar, V., Mandal, K., Mehra, K., Pohit, S., Raina, R.S., Suman, S.) *Cambridge University Press: New Delhi*, pp. 341-345
- Bhattacharya, S., Sharma, P., Shilpa, Sheikh, F. A., Kaul, A. (2015). ‘Role of Mediating Organization in Influencing Collaboration: Case Study of CEFIPRA- A bilateral S&T institution established by India and Freance’ In: *India Science and*

Technology Volume 3 (ed: Banerjee, P., Bhattacharya, S., Kumar, V., Mandal, K., Mehra, K., Pohit, S., Raina, R.S., Suman, S.), Cambridge University Press: New Delhi pp. 398-403.

- Shilpa, Bhattacharya, S. (2015). 'Some Salient Aspects of India's Publication Activity' In: *India Science and Technology Volume 3* (ed: Banerjee, P., Bhattacharya, S., Kumar, V., Mandal, K., Mehra, K., Pohit, S., Raina, R.S., Suman, S.), Cambridge University Press: New Delhi pp. 282-287.
- Jayanthi, A.P. and Bhattacharya S (2014) 'Technology development through selection and concentration: Case study of Korean Nanotechnology initiative', in (eds.) Mandal, Kasturi; Nadia Asheulova and Sevtlana G. Kirdina 'Socio Economic and Technological Innovations: Mechanism and Institutions', Narosa Publishing House: New Delhi, pp.498-513.
- Bhattacharya, S. (2013). India's International and Domestic Patent Scenario (Part A and B). In: *India Science and Technology Volume 2* (Edited Bhattacharya, S., Kumar, N., Mandal, K., Mehra, K., Nath, P., Pohit, S., Raina, R.) Cambridge University Press: New Delhi
- Bhattacharya, S., and Bhatti, M (2013) Mapping Nanotechnology Research and Innovation Activity in India.). In: *India Science and Technology Volume 2* (Edited Bhattacharya, S., Kumar, N., Mandal, K., Mehra, K., Nath, P., Pohit, S., Raina, R.) Cambridge University Press: New Delhi
- Bhattacharya, S. (2013) Science, Technology and Innovation Policy: Some critical thoughts. In: *India Science and Technology Volume 2* (Edited Bhattacharya, S., Kumar, N., Mandal, K., Mehra, K., Nath, P., Pohit, S., Raina, R.) Cambridge University Press: New Delhi. pp. 118.
- Bhattacharya, S. and Lal, K. and Joshi, K. (2013). Indian Firms Research Activity in the Era of Liberalization and Globalisation Era. In: *India Science and Technology Volume 2* (Edited Bhattacharya, S., Kumar, N., Mandal, K., Mehra, K., Nath, P., Pohit, S., Raina, R.) Cambridge University Press: New Delhi. pp. 168-177.
- Bhattacharya, S., and Bhatti, M (2013) Creating Capacity for Nanotechnology Research and Innovation in India. In: *India Science and Technology Volume 2* (Edited Bhattacharya, S., Kumar, N., Mandal, K., Mehra, K., Nath, P., Pohit, S., Raina, R.) Cambridge University Press: New Delhi. pp. 215-221.
- Bhattacharya, S., Bhatti, M, Jayanthi, A.P. and Malhotra, S.(2012) "Knowledge Creation and Transformation Process in a Frontier Technology: Case Study of Nanotechnology Research in India" In: *Advances in Nanotechnology*, Chapter 26, Volume 7, Westville Publishing.
- Bhattacharya, S. and Lal, K. (2010) "Innovation Activity in Indian Software Industry". In: *Liberalizing Research In Science and Technology: Studies in Science Policy* ed. By B.K.Pattnaik & Nadia Asheulova, St Petersburg: The Russian Academy of Sciences.
- Bhattacharya, S. and Lal, K. (2009) "Industrial R&D in India: Contemporary Scenario". In: *India Science & Technology 2008*, Nistads: New Delhi. pp. 138-141.
- Bhattacharya Sujit and Basu Prajit (2000), "A meso and micro level investigation into the intellectual structure of a research field: A scientometric approach" In: *Proceeding of the first Berlin workshop on Scientometrics & Informatics:*

Collaboration in Science, Germany- BERLIN, 16-19 August 1998 (eds: H. Frank & K. Hildrun) (Gesellschaft für Wissenschaftsforschung).

Resource Person/Invited Talk and Other Presentations

- Panelist at the Webinar on “Diplomacy for Science & Technology to Manage COVID-19 Pandemic”, July 24, 2020. Organised by Ramaiah Public Policy Centre, Bangalore
- Panelist at the STIP Online Panel Discussion on “STI Policy Governance and Program Linkages”, 10 June, 2020 (This event part of the extended public and private expert consultations for the formulation of India’s new Science, Technology and innovation Policy, 2020). Organised by the Office of the Principal Scientific Adviser and Dept. of Science and Technology
- Training of Officials of the Bangladesh Council of Scientific and Industrial Research in R&D Management, 17-21 February, 2020. Provided extensive training on 19th February on issues of innovation and technology assessment.
- Invited talk “Copyright, Ethics and IP Information: Scientometric Study for Academic Excellence”, Workshop on Intellectual Property Protection and Innovation Management of Academics & Industry” at GITAM, Deemed to be University, 10th February, 2020
- Distinguished Speaker at Second Sino-Indian Joint Research Workshop on Science and Technology Innovation, Beijing December 16-18, 2020. Presentation titled *Orientation and Changes in Emerging Industry Policies* presented at Chinese Academy of Science and Technology for Development
- Distinguished Speaker at Second Sino-Indian Joint Research Workshop on Science and Technology Innovation, Beijing December 16-18, 2020. Presentation titled *Some Salient Aspects of India’s Innovation Ecosystem* presented at Tsinghua University.
- Invited Speaker & Moderator at the ASIP 9th Conference on Technology and Innovation for SMEs, 3-5 October, 2019, University of the Philippines, Diliman, Quezon City, Philippines.
- Invited talk “*Exploring the Cross-disciplinary Impact and Implications of Scientometric*” at the Indo-German workshop on Information retrieval, Informetrics & Scientometrics (IRIS)” at Cologne Germany, June 11-13, 2019.
- One of the plenary session speaker at the Session VI in the *India-ASEAN Inno Tech Summit*, 29-30 November, 2018, at The Lalit Hotel, New Delhi.
- Invited talk “IPR- Its implications in research, innovation and development” at the Asian-India Workshop on “Intellectual Property Rights & Technology Transfer”, 1-5th April, 2019, at India Habitat Centre, New Delhi
- Invited talk at the international conference “Planning for industrialisation in in 21st century’ 15-16 November, 2018.
- One of the plenary session speaker at the Session VI in the *India-ASEAN Inno Tech Summit*, 29-30 November, 2018, at The Lalit Hotel, New Delhi.
- Invited talk at the international conference “planning for industrialisation in in 21st century’ 15-16 November, 2018.

- Invited speaker in the 7th National Conference of Institute of Scientometrics, 22 September, 2018, at KLE University, Belgave.
- Presented paper “Some salient aspects of new technologies: Policy implications for India” at the discussion meeting “Socio-Economic Impact of New Technologies: Policy Implications for India”, Nistads, 10th October, 2018
- Paper presented by my co-author Shilpa “Learning from Indian Nanotechnology Development: Exploring New Pathways for Effective Policy Interventions” at the 16th Globelics Conference, 24-26 October, Ghana, Accra, 2018.
- Invited as Keynote speaker for Innovation and Policy Conference, ASIP 2018 Bangkok Conference, 13-15, September, 2018.
- Plenary Talk ‘Global Industrial Network and the Changing Contours of Science in the 21st Century’ at the International Conference on Innovations, Knowledge Accumulation and Development in the Era of Fourth Industrial Revolution, 15th-16th March 2018 Punjabi University Patiala
- Invited talk ‘STI Indicators: Challenges & Opportunities’ at the Workshop on Science, Technology and Innovation (STI) Policy Research, 11-13 December, 2017. Organised by Centre for Excellence in Policy Research, Indian Institute of Science, Bengaluru
- Invited talk ‘International Collaboration: Changing the Contour of Science in the 21st Century’ at the 6th National Conference of Scientometrics ‘Information for all’, 23-25 November, 2017 Bangalore
- New and Emerging Technologies: What is there for Emerging and Small Nations? Presentation at Intl Conf. “Science and the Small Nations: Bridging the Gaps. A science Diplomacy Initiative. 14th-16th November 2017, New Delhi. Organised by Zaheer Science Foundation and UNESCO
- Detailed presentation on conceptual framework and applications of social network analysis (SNA) given by in the Special Session on Social Networking Analysis: Tools and Organisations in the International IndiaLICS Training Workshop on 1st November, 2017 at NISTADS
- Developing a Conceptual Model for Foresight Analysis: Implications for Policy Studies in NISTADS-STEPI workshop 2017
- Umang Gupta and Sujit Bhattacharya National Intellectual Property Rights Policy 2016: Can it provide new opportunities for research, innovation and development? Presented at the 4th IndiaLICS Conference, 2nd – 4th November, 2017
- Anurag Kanujia* and Sujit Bhattacharya The Genetically Modified (GM) Food Debate in India: A Critical Introspection presented at the 15th Globelics Conference, 11-13th October, 2017, Athens, Greece (*presented by)
- Anurag Kanujia* and Sujit Bhattacharya. The GM crop debate in India: Identification of Stakeholders and regional variations in their interests. Presented at the 4th IndiaLICS Conference, 2nd – 4th Novemeber, 2017 (*presented by)
- Shilpa* and Sujit Bhattacharya. Social network analysis of Indian Research Cooperation with France and Germany in Water sciences. Presented at the 4th IndiaLICS Conference, 2nd – 4th Novemeber, 2017 (*(presented by)
- Bhattacharya, S. ‘*Missing Gaps in Indian nanotechnology Development: Exploring Effective Policy Interventions for innovation and Commercialisation*’. International

Seminar on Creation and Diffusion of Technology, organized by TATA Trusts at IIT, Bombay, March 18, 2016.

- *Plenary Talk* Bhattacharya, S. 'Structured databases as Innovation Ecosystem'. Big Data mining: Concepts Methods and Applications, organised by Society for Information Science and CSIR-Institute of Microbial Technology, November 27-29 2014.
- *Keynote Presentation*. 'International Collaboration: Changing the Global Landscape of Science in the 21st Century'. 10th International conference of Webometrics, Informetrics and Scientometrics, organised by Technical University of Ilmenau, Germany, September 3-5, 2014.
- Shilpa, Kaul, A., Bhattacharya, S. 'Salient aspects of India's Publication activity'. 10th International conference of Webometrics, Informetrics and Scientometrics, organised by Technical University of Ilmenau, Germany, September 3-5, 2014.
- Kaul, A., Bhattacharya, S., Shilpa. 'Measuring Efficiency of Scientific Research'. 10th International conference of Webometrics, Informetrics and Scientometrics, organised by Technical University of Ilmenau, Germany, September 3-5, 2014.
- Panelist at the workshop entitled 'Innovation: Brokering Nanotechnology, Creating Capacity' organized by Maastricht University at the IISER-Pune, March 27-28, 2014.
- Presentation entitled 'Salient aspects of Indian research activity: A scientometric investigation' at the National Workshop on Measuring Science: The Scientometric Approach, held in Nistads, February 14, 2014.
- Keynote speaker on the TEQIP-II/COE Sponsored workshop on Exploration in Knowledge Analytics at PES University, Bangalore, February 7, 2014. Talk Titled Big Data and Scientometrics: From Google Search Engine to Competitive Intelligence.
- Keynote Lecture 'Emerging Technologies and New Initiatives: A Case Study of Emergence of India in the Nanotechnology Race' at the NISTADS-NIT Silchar workshop 'Innovating India' held at NIT Silchar, 25-26 November, 2013.
- Keynote address 'Scientometrics: Genesis, Tenet, and Output Measurement', at Ravishankar Shukla University, Raipur, September 22nd, 2013
- Expert talk on 'Issues in Managing Technologies in Emerging Areas: A Case of Nanotechnology' at the Senior Level Officers Training Programme at the Administrative Staff College, September 18, 2013
- Expert Talk at 'Advanced Interaction of Information Professionals', NISCAIR, August, 2013
- Invited talk entitled 'Does FDI Help in Building Innovation Capabilities in India? What is Innovation??' at the National Conference "The Last Verdict" on February 19, 2013 organized by Economics Society of Miranda House (University of Delhi)
- Invited talk entitled 'Nanotechnology Development in India: Governance &

Regulation’ at the Workshop on “Science, Technology and Innovation in India: Issues in Access, Equity and Inclusion” organized by RIS (Research and Information system for developing countries) on January 28th, 2013.

- Invited Talk ‘Issues in Managing Technologies in Emerging Areas: A Case of Nanotechnology’ on January 11, 2013. To the senior officers of Government of India. Administrative Staff College, Hyderabad
- Invited Talk ‘Research and Technology Assessment and Science Technology and Innovation Indicators’ on November 7, 2012. To the senior officers of Government of India. Administrative Staff College, Hyderabad.
- Panelist at the UNCTAD-RIS workshop on Technology and Innovation, November 2, 2012.
- Invited talk in the inaugural session ‘Setting the stage: what is your engagement with the world of nano?’ at the workshop on “Developing nanotechnology for an emerging India: Risks, benefits, governance” from November 22-24, 2012 Golkonda Hotel, Hyderabad
- Nagrajan Memorial Lecture entitled ‘Changing Landscape of Knowledge Production and Measurement Issues’ delivered at SIS Conference on November 25, 2013 at Silchar (Assam)
- Keynote Address ‘Information-Innovation-Technology: Creating Seamless Linkages’ delivered at SIS Conference on November 25, 2013 at Silchar (Assam)
- Invited Talk ‘Innovation: Different Models and Approaches’ on October 5, 2012. To the senior officers of Government of India. Administrative Staff College, Hyderabad.
- Sujit Bhattacharya and A.P. Jayanthi. ‘Responsible Nanotechnology Development in India: Moving ahead from Risk Governance to Innovation Governance’. International Conference on Public Policy and Governance 2012 (4–6 September 2012) at IISc Bangalore.
- Invited talk ‘Reflections on Indian Patenting Activity’ on March 20, 2012 at the SIS conference 2012 in association with CSIR-URDIP, Pune.
- Invited Talk 18 February at the Valedictory Session of the “International Conference on Creativity and Innovation: Breaking the Barriers to Reach the Bottom of the Pyramid”- February 17-18, 2012 organised by JK Education Foundation.
- Invited Talk at the National Workshop on Using Different Metrics for Assessing Research Productivity, organized by Indian Statistical Institute, New Delhi, February 16-17, 2012.
- ‘Nanotechnology Risk and Governance: Global Initiatives and Challenges for India’ presented at ICONSAT, January 20-23, 2012.
- S&T Policy in China and Innovation Indicators at the National Academy of Agricultural Resource Management Hyderabad, January 19, 2012.
- Invited Talk. ‘Scientometrics: The Way Ahead’. Delivered at the Workshop on “Evaluative Bibliometrics” November 09, 2011, New Delhi. Organised by Thomson Reuters in partnership with CSIR-NISCAIR.

- Bhattacharya, S., Bhati, M. 'China and India: Two new players in the technology race: Evidence from nanotechnology research'. 7th International Conference on Webometrics, Informetrics and Scientometrics & 12th COLLNET meeting, September 20-23, 2011, Istanbul, Turkey.
- Bhati, M., Bhattacharya, S. 'Nanotechnology Development in India: Quantitative Analysis'. 7th International Conference on Webometrics, Informetrics and Scientometrics & 12th COLLNET meeting, September 20-23, 2011, Istanbul, Turkey.
- China's Emergence as a Global Nanotech Player: Lessons for Countries in Transition. In: 13th International Conference of Scientometrics and Informetrics, Durban, South Africa (accepted as oral paper- not presented)
- Bhattacharya, S., Bhatti, M., Kshitij, A.P. Investigating the Role of Policies, Strategies, and Governance in China's Emergence as a Global Nanotech Player In Atlanta Conference of Science and Technology Policy 2011
- Does Ethical Issues Play an Important Role in Peer Review Process" at the EU 7th Framework Coordinated workshop on "Ethics in Science & Technology Responsibility" in Hyderabad, January 18-19, 2010.
- Landscape and key players in nanotechnology" presented at the "Workshop on IPRs In Nanotechnology: Issues, Trends and Challenges for India", January 28, 2010.

Papers Published in Conference Proceeding

- Bhattacharya, S. and Yadav, S. (2017) 'University in the Research and Innovation Ecosystem-- Case study of India' In: *Science, Technology and Innovation Policy: Foresight, Growth, Roadmaps, Sectoral impact: Assessment and Alliances* (edited Mohsin Khan) Zaher Science Foundation: New Delhi.
- Bhattacharya, S. (2016) 'Missing Gaps in Indian nanotechnology Development: Exploring Effective Policy Interventions for innovation and Commercialisation'. In: *Proceedings of the International Seminar on Creation and Diffusion of Technology*, organized by TATA Trusts at IIT, Bombay, pp. 205-217.
- Shilpa, Kaul, A., Bhattacharya, S. (2014) 'Salient aspects of India's Publication activity'. In: *Proceedings of 10th International conference of Webometrics, Informetrics and Scientometrics* (edited Markscheffel, B., Fischer, D., Buttner, D., Kretschmer, H.Ed.), pp. 481-483, Germany - Technical University of Ilmenau.
- Kaul, A., Bhattacharya, S., Shilpa, Sharma, P. (2014). Measuring Efficiency of Scientific Research. In: *Proceedings of 10th International conference of Webometrics, Informetrics and Scientometrics* (edited Markscheffel, B., Fischer, D., Buttner, D., Kretschmer, H.), pp. 87-90, Germany - Technical University of Ilmenau.
- Bhattacharya, S, Bhati, M. and Kshitij, A.P. (2011) "Investigating the Role of Policies, Strategies, and Governance in China's Emergence as a Global Nanotech Player". In: *IEEE conference proceeding of the 2011 Atlanta Conference on Science and Innovation Policy*.
(http://ieeexplore.ieee.org/xpls/abs_all.jsp?arnumber=6064462)

- Bhattacharya, S. (2008) “Intellectual property: Research, Innovation and Access and Affordability of medicines in developing countries (A case study of India) In: *Proceeding of the Geneva Forum: Towards Global Access to Health*, 25-28 May, 2008.
- Krishna, V.V., Bhattacharya, S. (2007) “Internationalisation of R&D and global nature of innovation: Emerging trends in India” In: *Proceeding of the Atlanta Conference on Science and Innovation Policy* 2007, 19-20 October, 2007
- Bhattacharya, S. (2007) “Impact of Indian Patents: Assessment through Citation Analysis” In: *Proceedings of the 11th International Conference of Scientometrics and Informetrics* (edited by Daniel Torres-Salinas and Henk F. Moed), Madrid Spain 2007. pp 96-99.
- Bhattacharya, S. (2006) “Developing a comprehensive database for assessing the patenting activity in India” In: *Proceedings of the 20th CODATA International Conference, Scientific Data and Knowledge within the Information Society* 23-25 October, 2006, Beijing China.
- Bhattacharya, S. (2006) “Indian Patent Activity in the US Patent System: Contemporary Scenario” In: *Proceedings of the 9th International Conference on S&T Indicators*, Leuvan (Belgium), 07-09 September, 2006
- Bhattacharya, S. (2006) “Harmonization of patent rules and regulations and its plausible implications in developing countries: A case study of India” In: *Proceedings of the Globalics India*, 04-07 October, 2006
- Bhattacharya, S. (2005) “Examining technological collaboration through patent analysis” In: *Proceeding of the 10th International conference on Scientometrics and Informetrics*, Stockholm, Sweden, 20-25 July. (eds. Peter Ingwersen and Birger Larsen). (Karolinska University Press: Stockholm), pp.470-478.
- Bhattacharya, S., Das, P., Gupta, R. (2004) “Patents as a Strategic Tool: A Study of Patenting Activity by Prolific Institutions of India and China” In: *Proceedings of the Second AIMS International Conference on Management* December 28-31, 2004, Indian Institute of Management (IIM) Kolkata
- Bhattacharya, S. (2003) “R&D Activity in India in the New Globalization Era” In: *Proceedings of R&D Management Conference*, 6-7 December, 2003, New Delhi, 140-144.
- Bhattacharya, S., Nath, P. (2003) “Application of Patent Statistics for Cross-country Comparison of Innovation Activity/Technological Change: A case study of China and India” In: *Proceeding of the 9th International Conference on Scientometrics and Informetrics*, 25-28 August, Beijing, 22-32.
- Bhattacharya, S., Meyer, M. (2002) “International Regulations on Intellectual Property Rights: Government Activities and Technological Capabilities in a Developing Nation” In: *Proceedings of the R&D Management Conference*, 8-9 July, Leuven.
- Bhattacharya, S., Meyer, M. (2002) “Exploring the Science/Technology Interface in a Dynamic Field within the Framework of Triple Helix” In: *Proceeding of the 4th Triple Helix Conference*, Copenhagen, Denmark and Lund, Sweden 6-9 November, 2002.
- Basu, Prajit K., Bhattacharya, S. (2001) Uncovering the Representative Set of Journals in a Research Field. In: *Proceeding of the 8th International Conference on*

Scientometrics and Informetrics, 16-20 July, University of New South Wales, Australia

- Bhattacharya, S., Basu, Prajit K. (2001) Mapping Research Area at the Macro Level through Journal Analysis In: *Proceeding of the 8th International Conference on Scientometrics and Informetrics*, 16-20 July, University of New south Wales, Australia
- Bhattacharya, S., Sukheeja, G., Basu, P.(1999) Mapping the knowledge domain of a research field through scientometric indicators In: *Proceedings of the seventh international conference of Scientometrics and Informetrics* held at Maxico from 5-9 July, 1999.
- Arora, J., Bhattacharya, S., Sukeeja, G. (1999) Monitoring cross-national research priorities in engineering and technology: A scientometric study In: *Proceeding of the VII int'l conf. on Scientometrics and Informetrics (Chapula, et. al. edited)* 37-49, Universidad de Colima: Maxico, 5-8 July,1999.
- Bhattacharya, S. (1998). “Mapping the cognitive structure of a research speciality using co- classification analysis: A case study of Condensed Matter Physics” In *Proceeding of the Fifth International of Science & Technology Indicators Conference* at Hinxton (Cambridge) 4- 6 June, 1998.
- Bhattacharya, S. (1997). Monitoring Research Activities using Bibliometric Indicators: A case study of Physics Research.” In: *Proceeding of the International Conference on Management of Technology*, ICMOT 97, 21-24 December, 1997, Dept. Of Management studies, IIT-Delhi.
- Bhattacharya, S. (1997). “Using the Macro and Micro Level Science Indicators to Map a Research Area” In: *Proceeding of the National workshop on Scientometrics and Informetrics* held at DRTC (Indian Statistical Institute) Bangalore from 16-19 March, 1998.
- Bhattacharya, S. (1996) “World Structure of Physics: A Cross-National Comparison” In: *Proceeding of the Fifth International Conference on Scientometrics and Informetrics* held at Rosary College (USA).

Policy Bulletin and Briefing Papers

(2012 onwards)

- Bhattacharya S.(forthcoming) Science, Technology and Innovation Strategies for Managing COVID-19: An Indian Perspective In: *Bulletin of NAM-Centre for Science & Technology* on “Role of Science and Technology in Managing Covid-19 Pandemic in Developing Countries”
- Suman, Y., Bhattacharya, S., Tabassum, J (2019) Employment Generation: Taking Indian SMEs upward in the Innovation Value Chain. Policy Bulletin, NISTADS: NISTADS/NTPR/2018/1
- Bhattacharya, S., Tabassum, J, Suman, S. (2015) Effective S&T Interventions: HRD, Industry (MSME), Innovation and Rural Skill And Employment: Summery for Policy Makers. Policy Bulletin, NISTADS: NISTADS/PD/ISTIP14
- Bhattacharya, S. Goswami, P.IPR Policy and Financial System(2016) In: BRICS Science and Technology Enterprise Partnership(eds. P. Goswami & Baldev Raj), NISTADS/NIAS

- Bhattacharya, S. Goswami, P. IPR Policy and Financial System(2016) In: BRICS Science and Technology Enterprise Partnership(eds. P. Goswami & Baldev Raj), NISTADS/NIAS
- Kumar, N., Bhattacharya, S., Abhinandan, T. A., Arunachalam, S., Bhati, M. and Das, A.K. BRICS-STEP: Building on Experience and Competencies In: BRICS Science and Technology Enterprise Partnership(eds. P. Goswami & Baldev Raj), NISTADS/NIAS
- Bhuvaneshwaram, S.P., Bhattacharya, S., Jamal, T., Pohit, S., Mandal, K., Goswami, P., BRICS-STEP: An Operational Model In: BRICS Science & Technology Enterprise Partnership (eds. P. Goswami & Baldev Raj), NISTADS & NIAS
- Bhattacharya, S., Shilpa, Preeti and Umang Gupta (2015). ‘Nanotechnology Research, Innovation and Commercialisation in India: Contemporary Status’. *ISTIP Bulletin No. 12*, September
- Bhattacharya, S., Shilpa and Kaul, A. (2014). ‘Scientific Research in India: Drawing Insights from Bibliometric Indicators’. *ISTIP Bulletin No. 3*, January.
- Koen Beumer and Sujit Bhattacharya (2014). Nanotechnologies in India. Policy Brief Number 3, June 2014. Published under Nano-Dev project www.nano-dev.org
- Bhattacharya, S., Jayanthi A.P, Shilpa (2012). Nanotechnology Development in India: Investigating Ten Years of India’s Efforts in Capacity Building. CSIR-NISTADS *Briefing Paper on Nanotechnology Number I*, March 2012, NISTADS, India. Available at www.nistads.res.in under Reports.
- Bhattacharya, S., Shilpa, Jayanthi A.P (2012). Nanotechnology Research and Innovation in India: Drawing Insights from Bibliometric and Innovation Indicators. CSIR-NISTADS *Briefing Paper on Nanotechnology Number II*, March 2012, NISTADS, India. Available at www.nistads.res.in under Reports.

Current Activity

- Special Focus on capturing research, innovation and regulation aspects related to COVID-19
- Developing report on Policies for Promoting Innovation and Entrepreneurship at the National and Regional Level in India
- Developing a book on “Innovation and Entrepreneurship” for Jammu & Kashmir Entrepreneurship Development Institute (JKEDI).
- Developing structured policy intervention on new converging technologies and its socio-economic impact. It includes study on Forth Industrial Revolution – its socio-economic context, indicators for measurement etc Under this theme, papers and policy brief are being prepared
- Developing a program for strengthening methodological capability in ‘social network analysis’. The objective is to help strengthen knowledge mapping exercise
- Co-Editing four issues of the journal (these will be special issues based on papers presented at the 4th IndiaLICS Conference, 2nd – 4th November, 2017) African Journal of Science Technology Innovation and Development; Asian Biotechnology

Development Review; Innovation and Development, and Journal of Scientometric Research

- Academic Teaching: I have developed and teaching two courses at the Academy of Scientific and Innovative Research. The *Science Technology and Innovation Policy* is an interdisciplinary course. This course is not a text book course and is taught in a few reputed universities across the world. Extensive efforts were taken to prepare this course drawing from various types of sources and my own research. Pedagogy covers lecture notes, tutorials, readings, presentations by students. IPR in the context of research, innovation and development broadens the understanding of IPR and their implications. This course is unique in its approach. Three students are doing PhD under me and are at various levels of finishing their PhD programme. One PhD student has submitted his thesis. I am actively involved in thesis evaluation of different universities. I have developed course on IPR for JNU and for IITM-Gwalior. The course on IPR was implemented and was taught by me in JNU during the period 2007-2009 and also later.
- Overall coordination of the *Journal of Scientometric Research* (three regular issues published each year and special issues).