

# Anand Jacob Abraham, Ph. D.

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## Teaching interests

Operations Research • Game theory • Operations Management • Supply Chain Management • Probability and Statistics

## Research interests

Operations Research • Game theory • Resource Economics • Supply chain Management

## Academic Employment

- Assistant Professor (December 2021-Present)  
Department of Industrial and Systems Engineering  
Indian Institute of Technology Kharagpur
- Assistant Professor (June 2021-November 2021)  
Operations and Supply Chain Area  
Indian Institute of Management Jammu
- Adhoc Faculty for Industrial Engineering (Jan 2021-May 2021)  
Department of Mechanical Engineering  
National Institute of Technology Calicut
- Research Associate (Jan 2020-July 2020)  
Department of Management Studies  
Indian Institute of Science Bengaluru  
Host: Prof. Parthasarathy Ramachandran

## Education

PHD (2015-2020), Department of Management Studies  
Indian Institute of Science, Bangalore

- **Thesis topic** Transboundary Externalities and the river sharing problem.  
*PhD. supervisor:* Prof. Parthasarathy Ramachandran

MTECH (2013-2015), in Industrial Engineering, National Institute Technology (NIT) Calicut.

- **Thesis topic** Metaheuristics for integrated production distribution planning problem  
*Dissertation advisor:* Dr. K. Ratna Kumar

BTECH (2009-2013), in Mechanical Engineering, University of Calicut.

## Publications & talks

### JOURNAL ARTICLES

1. **Abraham, A.** and Ramachandran, P. (2021) “The welfare implications of transboundary storage and dam ownership on river water trade”. *Mathematical Social Sciences*. Vol. 109, pp: 18-27. Elsevier. DOI: 10.1016/j.mathsocsci.2020.10.005 (**Q2, ABDC: A-category, SCI, IF:0.669**)
2. **Abraham, A.,** and Ramchandran, P. (2020). “A solution for the flood cost sharing problem”. *Economics Letters*. Vol. 189: 109030. Elsevier. DOI: 10.1016/j.econlet.2020.109030. (**Q1, ABDC: A-category, SSCI, IF: 1.745**)

- Ratna Kumar, K., Radha Ramanan, T. , **Abraham, A.**, Sridharan, R., (2019). “Integrated production distribution problem in a partial backorder and order refusal environment” . *International Journal of Management Concepts and Philosophy*. Vol. 12(3). pp: 296-311. Inderscience publishers. DOI: 10.1504/IJMCP.2019.100668. (ABS: 1, RePEc)

#### REFEREED BOOK CHAPTERS

- Abraham, A.**, and Ramachandran, P. (2021). “Stable Agreements with Fixed Payments on Transboundary Flood Prone Rivers”. In: Morais D., Fang L., Horita M. (eds.) Contemporary Issues in Group Decision and Negotiation. *Lecture Notes in Business Information Processing*, Vol. 420. pp: 99-112. Springer. DOI: [https://doi.org/10.1007/978-3-030-77208-6\\_8](https://doi.org/10.1007/978-3-030-77208-6_8). (SCOPUS)
- Abraham, A.**, and Ramachandran, P. (2019). “Effect of Pollution on Transboundary River Water Trade”. In: Morais D., Carreras A., de Almeida A., Vetschera R. (eds) Group Decision and Negotiation: Behavior, Models, and Support. GDN 2019. *Lecture Notes in Business Information Processing*, Vol. 351, pp: 146-159. Springer. DOI: [https://doi.org/10.1007/978-3-030-21711-2\\_12](https://doi.org/10.1007/978-3-030-21711-2_12). (SCOPUS)

#### CONFERENCES

- Manzoor, R., and **Abraham, A.** (2021)“Optimal Ordering and Coordination in a Two-Echelon Supply Chain under Disruption”, at the *XXIV Annual International Conference of The Society of Operations Management (SOM-2021)*, held virtually by XLRI and SOM from November 12-15, 2021. (Abstract only)
- Abraham, A.**, and Ramachandran, P. (2021). “Stable Agreements with Fixed Payments on Transboundary Flood Prone Rivers”, at the *Group Decision and Negotiation annual meeting 2021* held virtually by Ryerson University, Canada, from June 06-10, 2021.
- Abraham, A.** (2020). “Axiomatic solution for the flood cost sharing problem” presented at the *Seventeenth AIMS International Conference on Management* held at IIM Kozhikode on January 2-4, 2020. ISBN: 978-1-943295-14-2. (Abstract only)
- Abraham, A.**, and Ramachandran, P. (2019). “A market mechanism for sharing a polluted river”. In the *Proceedings of the 11th World Congress on Water Resources and Environment (EWRA 2019)*, pp:523-524, held at Madrid, Spain on June 25-29, 2019. ISBN: 978-618-84419-0-3. Extended abstract available: [http://ewra.net/pages/EWRA2019\\_Proceedings.pdf](http://ewra.net/pages/EWRA2019_Proceedings.pdf)
- Abraham, A.**, and Ramachandran, P. (2019). “Effect of pollution on transboundary river water trade”, at the *Group Decision and Negotiation annual meeting 2019* held at Loughborough University, England from June 11-15, 2019.
- Abraham, A.** (2018). “Pollution and river water trade”, at the *Annual meeting of Northeastern Agricultural and Resource Economics Association (NAREA)* held in Philadelphia, USA from June 10-12, 2018. (Abstract only).
- Abraham, A. J.**, Ratna Kumar, K., Sridharan, R., and Singh, D. (2014). “Impact of backordering and stockout on integrated production and distribution planning problem with plant side restrictions”, in *Proceedings of XVIII annual international conference of the society of operations management,2014*, pp. 509-514. ISBN: 978-93-84935-023.

#### MANUSCRIPTS IN PREPARATION

- Thansiha, A., Basith, V., **Abraham, A.**, Sajith Babu. “Optimal ordering under Supply disruptions and Behavioral considerations”. (In Preparation)
- Abraham, A.** and Sambasivan, B. “Decentralized energy storage and price rationing for managing supply demand mismatch in a transitioning electricity system”. (In Preparation)
- Abraham, A.** and Ramachandran, P. “A pricing policy for water sharing along a polluted river”. (In Preparation)
- Ranjith B. Nair, Abijith, K. P.,**Abraham, A.**, Ratna Kumar, K. and Sridharan, R. “Coordination in dual channel supply chains under pricing duopoly”. (In Preparation)

#### TALKS DELIVERED

1. Managing supply demand mismatch in a transitioning electricity system (Toyohashi University of Technology Japan, January 2018)
2. Sustainable use of transboundary rivers with pollution externalities (Toyohashi University of Technology Japan, January 2018)

### Grants, Scholarships, & Achievements

1. *IISc Research Associate fellowship* (January 2020-July 2020)
2. *European Water Resources Association (EWRA) Grants to young scientists/engineers from a developing country for distant paper submission* (June 2019)
3. *Northeastern Agricultural and Resource Economics Association (NAREA) conference grant* (June 2018)
4. *Japan Science and Technology (JST) Sakura Science fellowship*(January 2018)
5. *Senior Research Fellowship (SRF)* from Ministry of Human Resources Development, Government of India (August 2017-January 2020)
6. *Junior Research Fellowship (JRF)* from Ministry of Human Resources Development, Government of India (August 2015-July 2017)
7. *Certificate of Excellence in Bachelor of Technology* (2016), awarded by University of Calicut for being in the top 5% of BTech candidates who appeared for examination in April 2013.

### Other scholarly activities

#### PEER REVIEW EXPERIENCE

1. Reviewer for *Environmental and Resource Economics (Springer)*  
Ref: "Acknowledgement of reviewers for 2018". *Environmental Resource Economic* (2019) 72: 609.  
<https://doi.org/10.1007/s10640-019-00319-w>.
2. Reviewer for *Group Decision and Negotiation (Springer)*  
Ref: de Vreede, GJ., Schoop, M. "Editorial". *Group Decision Negotiation* (2021). <https://doi.org/10.1007/s10726-021-09726-1>.
3. Reviewer for *Mathematical Social Sciences (Elsevier)*

#### WORKSHOPS ATTENDED

1. "Understanding and Resolving Water Conflicts" organised jointly by the Forum for Water Conflicts in India, TERI and ATREE held at The Energy Research Institute (TERI), Bengaluru, India Oct. 4-7, 2017.
2. "Personal transformation and interpersonal skills" organised by the School of Management Studies, National Institute of Technology Calicut, Dec. 20-21, 2013.

### References

- Dr. Parthasarathy Ramachandran, Professor and Chairperson, Department of Management Studies, Indian Institute of Science Bengaluru. (PhD. supervisor). Ph: +917411187971.  
E-mail: parthar@iisc.ac.in
- Dr. K. Ratna Kumar, Assistant Professor of Industrial Engineering, Department of Mechanical Engineering, National Institute of Technology Calicut. (MTech dissertation advisor). Ph: +917561833833.  
E-mail: ratna\_kumar@nitc.ac.in

- Dr. António Miguel Osório da Costa, Associate Professor, Department of Economics, Universitat Rovira i Virgili, Barcelona-Spain. (PhD. thesis examiner). Ph: (+34) 977 758 912.  
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