



Dr. Sooraj T R

Professor in Computer Science and Engineering

Administrative Responsibilities

Departmental responsibilities:

- Charge of Computer Science and Business Systems
- Tutor of 2025-2029 CS Data Science batch

Education Summary

Doctoral work(PhD): *"On Some Hybrid Soft Set Models and Their Applications in Decision Making"* (**May 2018**) VIT, Vellore.

Post-Graduation: **M. Tech** in Computer Science and Engineering
M.S. University

Graduation: **B. Tech** in Information Technology (**2008**)
College of Engineering Perumon, Kollam.

Employment History

Teaching and Research

- Professor in Computer Science and Engineering, Christ college of Engineering, Irinjalakuda (August 2025-present)
- Professor and Vice Principal, TKM Institute of Technology, Kollam (September 2024- August 2025)
- Head of the Department and Associate Professor, TKM Institute of Technology, Kollam (February 2023 to September 2024)
- Associate Professor, TKM Institute of Technology, Kollam (October 2020 to 2023 February)
- Associate Professor, MEA Engineering College, Perinthalmanna (2019 July to 2020 October)
- Associate Professor, Providence College of Engineering, Alapuzha (2018 January to 2019 July)
- Teaching Research Associate, Vellore Institute of Technology, Vellore (2014 August to 2017 August)
- Assistant Professor, MEA Engineering College, Perinthalmanna, (2012 June to 2014 July)

Journal/Papers Published

A. Publications in International Journals

- 1) **Sooraj T.R.**, B.K.Tripathy, "An Interval Valued Fuzzy Soft set Based Optimization Algorithm for High Yielding Seed Selection", *International Journal of Fuzzy Systems and Applications*, 7(2),pp 44-61. DOI: 10.4018/IJFSA.2018040102 **(Scopus)**
- 2) **Sooraj, T.R.** and Tripathy, B.K., 2017. Optimization of Seed Selection for Higher Product using Interval Valued Fuzzy Soft sets, *Songklanakarin Journal of Science and Technology*, 40(5):1125-1135, DOI: 10.14456/sjst-psu.2018.139 **(TR and Scopus)**
- 3) B.K.Tripathy, **Sooraj T.R.**, RK Mohanty, A. Panigrahi, "Group Decision Making through Interval Valued Intuitionistic Fuzzy Soft Sets", *International Journal of Fuzzy Systems and Applications*, 7(3), DOI: 10.4018/IJFSA.2018070106 **(Scopus)**
- 4) B.K.Tripathy, **Sooraj T.R.**, RK Mohanty, "Advances in Decision Making using Hybrid Soft set Models", *International Journal of Pharmacy and Technology*, 8(3), pp. 17694-17721, September 2016. **(Scopus)**
- 5) RK Mohanty, **Sooraj.T.R.**, B.K.Tripathy (2015). "An application of IVIFSS in medical diagnosis decision making, *International Journal of Applied Engineering Research (IJAER)*, Vol. 10(92), pp. 85-93. **(Scopus)**
- 6) B.K.Tripathy, **Sooraj.T.R.**, RK Mohanty, S.Ch. Parida (2015). "Rough Multisets and Their Properties", *International journal of Scientific and Innovative Mathematical Research*, vol. 3(2), pp. 690-694.

B. Publications in International/National Conferences

- 1) B.K.Tripathy, **Sooraj.T.R.**, RK Mohanty (2016). "A New Approach to Fuzzy Soft Set Theory and Its Application in Decision Making", *Computational Intelligence in Data Mining—Volume 2*, pp. 305-313 **(Springer, Scopus)**
- 2) **Sooraj.T.R.**, RK Mohanty, B.K. Tripathy (2016). "Fuzzy Soft Set Theory and its Application in Group Decision Making", *Advances in Intelligent Systems-Advanced Computing and Communication Technologies*, pp.171-178 **(Springer, Scopus)**

- 3) B.K.Tripathy, RK Mohanty, **Sooraj.T.R**, Arun. K.R. (2016). "", *Advances in Intelligent Systems and Computing*, 439, pp. 93-100, 2016. **(Springer, Scopus)**
- 4) B.K Tripathy, RK Mohanty, **Sooraj.T.R**, A. Tripathy (2016). "A modified representation of IFSS and its usage in GDM", *Smart Innovation, Systems and Technologies*, 50, pp. 365-375, 2016. **(Springer, Scopus)**
- 5) B.K. Tripathy, RK Mohanty, **Sooraj.T.R** (2016). "On Intuitionistic Fuzzy Soft Sets and its Application in Decision Making", *Lecture Notes in Electrical Engineering*, pp.67- 74, 2016. **(Springer, Scopus)**
- 6) RK Mohanty, **Sooraj.T.R**, B.K. Tripathy (2016). "IVIFS and decision-making", *Advances in Intelligent Systems and Computing*, 468, pp. 319-330, 2017. **(Springer, Scopus)**
- 7) B.K.Tripathy, **Sooraj.T.R**, RK Mohanty (2016). "A New Approach to Interval-valued Fuzzy Soft Sets and its Application in Decision Making", *Advances in Intelligent Systems and Computing*, 509, ISBN: 978-981-10-2524-2, pp. 3-10, 2016. **(Springer, Scopus)**
- 8) **Sooraj.T.R**, B.K. Tripathy, "Interval valued Hesitant Fuzzy Soft Sets and its Application in Stock Market Analysis", *Advances in Intelligent Systems and Computing*, Volume 517, 2017, Pages 755-764. **(Springer, Scopus)**
- 9) **Sooraj.T.R**, RK Mohanty and B.K. Tripathy (2016). "Hesitant Fuzzy Soft Set and its Application in Decision Making", *Advances in Intelligent Systems and Computing*, Volume 517, 2017, Pages 315-322. **(Springer, Scopus)**
- 10) B.K.Tripathy, **Sooraj.T.R**, RK Mohanty (2016). "A New Approach to Interval-valued Fuzzy Soft Sets and its Application in Group Decision Making", *Proc. of Int. Conf. on Computer systems, Data Communication and Security, CDCS-2015*, pp. 1-8, Kochi. **(DBLP)**
- 11) B.K.Tripathy, RK Mohanty, **Sooraj.T.R** (2016). "On Intuitionistic Fuzzy Soft Set and its Application in Group Decision Making", in the proceedings of ICETETS-2016, Thanjavur. **(IEEE, Scopus)**
- 12) **Sooraj T.R.**, RK Mohanty, B.K. Tripathy, " A New Approach to Interval valued Intuitionistic Hesitant Fuzzy soft sets and their application in Decision Making", in the proceedings of SCI-2017, Vishakapattanam. **(Springer, Scopus)**
- 13) **Sooraj T.R.**, RK Mohanty, B.K.Tripathy, "Improved Decision making application through IFSS", in the proceedings of SCI-2017, Vishakapattanam. DOI: 10.1007/978-981-10-5544-7_22 **(Springer, Scopus)**
- 14) RK Mohanty, **Sooraj.T.R**, B.K.Tripathy (2015). "An application of IVIFSS in medical diagnosis decision making, in the proceedings of ICASME-2015, Chennai.
- 15) B.K.Tripathy, **Sooraj.T.R**, RK Mohanty, S.Ch. Parida (2015). "Rough Multisets and Their Properties", in the proceedings of ICMS-2015, Tirupati.
- 16) **Sooraj.T.R**, B.K.Tripathy, "On Interval valued Fuzzy soft sets and their Application in Group Decision Making", in the proceedings of NCMAC 2015, At Nalagaja College, Odisha.
- 17) **Sooraj.T.R** and B.K.Tripathy (2016). "On IVFSS and its application in decision making", In: *Proceedings of NCICT 2016*, Dayananda Sagar University, Bangalore.

C. Papers presented in International / National Conferences

- 1) B.K.Tripathy, RK Mohanty, **Sooraj.T.R** (2016), "Application of Uncertainty Models in Bioinformatics", *Handbook of Research on Computational Intelligence Applications in Bioinformatics*, Chapter: Chapter - 9, Publisher: IGI Global, Editors: Sujata Dash, Bidyadhar Subudhi, pp.169-182. **(Scopus)**
- 2) B.K.Tripathy, **Sooraj.T.R**, RK Mohanty, Arun K.R, "Parameter Reduction in Soft Set Models and Application in Decision Making", *Handbook of Research on Fuzzy and Rough Set Theory in Organizational Decision Making*, Publisher: IGI Global, Editors: Arun Kumar Sangaiah., Xiao-Zhi Gao and Ajith Abraham ISBN13: 9781522510086|ISBN10: 1522510087|EISBN13: 9781522510093, DOI: 10.4018/978-1-5225-1008-6. **(Scopus)**

- 3) B.K.Tripathy, **Sooraj.T.R**, RK Mohanty, Application of soft set in game theory, Encyclopedia of Information Science and Technology-4th ed., pp. 3226-3236. DOI: 10.4018/978-1-5225-2255-3.ch281
(Scopus)
- 4) B.K.Tripathy, **Sooraj T.R.**, RK Mohanty, "Memetic Algorithms and Its Applications in Computer Science", Handbook of Research on Modeling, Analysis, and Application of Nature-Inspired Metaheuristic Algorithms, Eds: Sujata Dash, B.K. Tripathy and Atta ur Rahman. IGI Global, pp. 73-93. DOI: 10.4018/978-1-5225-2857-9.ch004
(Scopus)
- 5) **Sooraj T.R.**, RK Mohanty, B.K. Tripathy, "Naming Services in Internet of Things", CRC.
(Scopus)
- 6) **Sooraj T.R.**, RK Mohanty, B.K. Tripathy, "Image segmentation using metaheuristic – based deformable models", In book: Hybrid Metaheuristics for Image Analysis, DOI: 10.1007/978-3-319-77625-5_6, Springer.
(Scopus)
- 7) **Sooraj T.R.**, RK Mohanty, B.K. Tripathy, "Rough set and soft set models in image processing", IGI. DOI: 10.1515/9783110552072-006, In book: Intelligent Multimedia Data Analysis
- 8) B.K. Tripathy, Sooraj.T.R., RK Mohanty, "Big Data Techniques in Social Network Analysis", In book: Big Data Analytics: A Social Network Approach, Publisher: CRC Press, Taylor and Francis group, DOI: 10.1201/9781315112626-3

Areas of Interest

- Soft Computing
- Machine Learning
- Computer Networks

Achievements

- Research Award in 2015, 2016 and 2017 from VIT Vellore

FDPs attended

1. "Full Stack Web Development". at TechSaksham.
2. Workshop on latex. at GITAM, Bangalore.
3. Artificial Intelligence. at Microsoft and SAP.
4. IOT and Its Application In Instrumentation. in association with IIT Guwahati and ICT Academy.
5. BrainMapping and Artificial Intelligence. at IIT Delhi.
6. Artificial Intelligence and BrainMapping. at IIT Delhi.
7. Cyber Security. at St. Thomas College of Engineering, Kerala.