SHWETA SURAN

shweta@taltech.ee | +372 5803 7683

ETIS · ResearcherID · SCOPUS · ORCID
ResearchGate · LinkedIn · GitHub

EXPERIENCE

October' 2021 – Present
ANALYST, Information Systems Group
Tallinn University of Technology (Estonia)
Responsibilities: Assisting in ongoing research, providing guidance, and establishing research methodologies, and writing scientific reports and manuscripts.

October' 2021 – Present
EXTERNAL SCHOLAR, Collective Intelligence Research Group
IT University of Copenhagen (Denmark)
Research Area: Collective Intelligence, Citizen Science, Collective Behaviour and Social Network Analysis.

October' 2017 – September' 2021
EARLY-STAGE RESEARCHER, Information Systems Group
Tallinn University of Technology (Estonia)
Research Area: Collective Intelligence, Citizen Science, Collective Behaviour and Social Network Analysis.
Other Responsibilities: Supervised master's theses, worked as Teaching Assistant for master's courses and contributed to research projects as Research Support Staff.

July' 2015 – February' 2017
ASSISTANT PROFESSOR, Krishna Engineering College (India)
Courses: Digital Image Processing, Data Mining, and Software Engineering.
Other Responsibilities: Supervised bachelor's and master's theses.

November' 2014 – June' 2015
PROGRAMMER ANALYST, Cognizant Technology Solutions (India)
Tasks: Requirement Analysis and Testing.

January' 2011 – June' 2011
TECHNICAL SPECIALIST, iYogi Technical Services (India)
Level 2 Voice Technical Specialist – *Dell on Call* Process.

EDUCATION

2017 – 2021
DOCTOR OF PHILOSOPHY (PhD), Tallinn University of Technology (Estonia)
Information and Communication Technology

Thesis: *'A Generic Framework for Collective Intelligence Systems'*

2012 – 2014
MASTER OF TECHNOLOGY (M.TECH.), SRM University (India)
Knowledge Engineering – Computer Science Engineering
Thesis: *'Cerebral Vessel Delineation Based on Segmentation and Skeletonization'*

2007 – 2011
BACHELOR OF TECHNOLOGY (B.TECH.), Uttar Pradesh Technical University (India)
Computer Science Engineering
Thesis: *'Autorun Batch File to Establish Network File Sharing for University'*

RESEARCH PROJECTS

- [HITSA IT Akadeemia] EITSA20017, **_'Implementation of ICT-based technical solutions for the speciality-specific courses of the Waterway Safety Management study programme'_**

Description: *The aim of the project is to update and modernize the speciality-specific courses of the Waterway Safety Management study program by implementing ICT-based technical solutions and ICT-related knowledge and skills in order to bring the study program into compliance with the standards of the International Hydrographic Organization.*
Duration: *1st April' 2020 – 31st July'2021*

Designation: **_Senior Research Staff_**

- [Smart Specialisation Project] LEP19022, **_'Applied research for creating a cost-effective interchangeable 3D spatial data infrastructure with survey-grade accuracy'_**

Description: *The current research main target is to impact the whole spatial data management process by producing the next level 3D spatial base data layer and integrating it with widely used existing spatial databases. To be able to look at the process as a whole the research will include the full process of the spatial data management - from the data generation to the spatial data infrastructure platform. One of the key elements is to understand the effect of implementing AI-based automated information detection in every process to reduce costs and maximize efficiency and therefore reduce the time spent on the data generation process.*
Duration: *1st April' 2019 – 31st March'2021*

Designation: **_Research Staff_**

SUPERVISED THESES

- **_Enabling Sensemaking and Trust in Communities: An Organizational Perspective_**. 2019. Sijo Arakkal Peious. TalTech (Estonia) [Master's Thesis]
- **_Weather – Temperature Pattern prediction and Anomaly Identification using Artificial Neural network_**. 2016. KEC (India) [Bachelor's Thesis]
- **_Iris Recognition Using Feature Detection Techniques in MATLAB Simulink Model Blockset_**. 2016. KEC (India) [Bachelor's Thesis]
- **_Skincure: A Real-Time Analysis System to Aid in Malignant Melanoma Early_**. 2015. KEC (India) [Bachelor's Thesis]
- **_Cloud-Based Online Blood Bank Repository_**. 2015. KEC (India) [Bachelor's Thesis]

VOLUNTEER WORK

- Reviewed book on Collective Intelligence for **Cambridge University Press** 2020*.
- Setting up **PURA (Providing Urban Amenities to Rural Areas),** in Kattankulathur, Chennai, India. Duration: August' 2012 - March' 2013
- ***Diabetes Health Awareness Camp***, New Delhi, India. Duration: August' 2007 - December' 2010

SEMINARS & WORKSHOPS

- Presented ongoing research and attended 24th *Estonian Winter Schools in Computer Science* (EWSCS' 2019) and 17th – 18th *Estonian Summer School on Computer and Systems Science* (ESSCaSS' 2018, ESSCaSS' 2019), Estonia.
- Attended Workshop on '*Exploring Pathways to promote Entrepreneurship Through Incubation & Innovation*', organized by Technology Business Incubator - KIET Group of Institutes and Govt. of India (NSTEDB, DST, Ministry of MSME, Small Industries Development Bank of India), India. 24 Jan' 2016 to 25 Jan' 2016.
- Attended Faculty Development Program on '*Significance of Accreditation & Entrepreneurship Awareness*', organized by Krishna Engineering College, Ghaziabad, India. 2015.
- Attended Short Term Training Program on '*Two Week ISTE STTP Workshop on Introduction to Design of Algorithms*', organized under MHRD NMEICT at Krishna Institute of Engineering and Technology, Ghaziabad, India. 25 May' 2015 to 30 May' 2015.
- Assisted in Faculty Development Program on '*Hands-on Training for MATLAB & its Application*', organized by SRM University, India. 2014.
- Attended workshop on '*Architectural Thinking for Software Engineers*' on 4 Mar' 2013 & 5 Mar' 2013, organized by SRM University, India. 2014.
- Participated in National Seminar on '*Computation Intelligence*' on 21 Jan' 2013 & 22 Jan' 2013, organized by SRM University, India. 2013.
- Attended Faculty Development Program on '*Next Generation Intelligent Optical Network*' by Dr. Biswanath Mukhrejee, University of California Davis on 25 Jun' 2012 – 29 Jun' 2012, organized by SRM University, India. 2012.

CERTIFICATES & ACHIEVEMENTS

- Won **SAP Fellowship Award** for being one of the Top 200 Performing Participants in '**Use of ICT in Education for Online and Blended Learning**' Faculty Development Program by IIT Bombay, India (2016).
- Awarded **Gold Medal for securing First Rank with Honours in M. Tech** - Knowledge Engineering, SRM University, India (2014).

TECHNICAL SKILLS

- ***Programming Languages***: MATLAB, Python, R.
- ***Programming Tools***: MATLAB, MAXQDA, RQDA, Orange, JASP, RStudio.

RESEARCH INTERESTS

Collective Intelligence. Citizen Science. Crowdsourcing. Collective Behaviour. Social Network Analysis. Machine Learning. Data Mining. Digital Image Processing. Software Engineering.

PUBLICATIONS

- *[I.3]* Suran S., Pattanaik V., Kurvers R. H. J. M., Hallin C. A., Liddo A. D., Krimmer R., and Draheim D. 2021. Building Global Societies on Collective Intelligence: Challenges and Opportunities. [Working Draft]

- *[C.6]* Peious S. A., Suran S., Pattanaik V., and Draheim D. 2021. Enabling sensemaking and trust in communities: an organizational perspective. In Proceedings of the 23rd International Conference on Information Integration and Web-based Applications & Services (iiWAS' 21). Association for Computing Machinery, New York, NY, USA. [Forthcoming]

- *[C.5]* Suran S., Pattanaik V., and Draheim D. 2020. CommunityCare: Tackling Mental Health Issues With The Help Of Community. In Proceedings of the 22nd International Conference on Information Integration and Web-based Applications & Services (iiWAS' 20). Association for Computing Machinery, New York, NY, USA, pp. 377–382. https://doi.org/10.1145/3428757.3429114

- *[J.1]* Suran S., Pattanaik V., and Draheim D. 2020. Frameworks for Collective Intelligence: A Systematic Literature Review. ACM Comput. Surv. 53, 1, Article 14(February 2020), 36 pages. https://doi.org/10.1145/3368986

- *[C.4]* Pattanaik V., Suran S., and Draheim D. 2019. Enabling Social Information Exchange via Dynamically Robust Annotations. In Proceedings of the 21st International Conference on Information Integration and Web-based Applications & Services (iiWAS' 19). Association for Computing Machinery, New York, NY, USA, pp. 176–184. https://doi.org/10.1145/3366030.3366060

- *[C.3]* Suran S., Pattanaik V., Yahia S.B., Draheim D. (2019) Exploratory Analysis of Collective Intelligence Projects Developed Within the EU-Horizon 2020 Framework. In: Nguyen N., Chbeir R., Exposito E., Aniorté P., Trawiński B. (eds) Computational Collective Intelligence. ICCCI 2019. Lecture Notes in Computer Science, vol 11684. Springer, Cham. https://doi.org/10.1007/978-3-030-28374-2_25

- *[I.2]* Suran, S., Pattanaik, V., Singh, M., Gupta, P.K., and Gupta, P. 2017. Brain Imaging Procedures and Surgery Techniques: Past, Present and Future. International Journal of Bio-Science and Bio-Technology 9, 3, 23–34. https://doi.org/10.14257/ijbsbt.2017.9.3.03

- *[I.1]* Tyagi H., Suran S., and Pattanaik V. 2016. Weather - Temperature Pattern Prediction and Anomaly Identification using Artificial Neural Network. International Journal of Computer Applications. Published by Foundation of Computer Science (FCS), NY, USA, 140(3): pp. 15-21 (April 2016). https://doi.org/10.5120/ijca2016909252

- *[C.2]* Suran S., Pattanaik V., and Malathi D. 2014. Discovering Shortest Path between Points in Cerebrovascular System. In Proceedings of the 6th IBM Collaborative Academia Research Exchange Conference (I-CARE' 14). Association for Computing Machinery, New York, NY, USA, pp. 1–3. https://doi.org/10.1145/2662117.2662122

- *[C.1]* Pattanaik V., Suran S., and Prabakaran S. 2014. Inducing Human-like Motion in Robots. In Proceedings of the 6th IBM Collaborative Academia Research Exchange Conference (I-CARE' 14). Association for Computing Machinery, New York, NY, USA, pp. 1–3. https://doi.org/10.1145/2662117.2662118

Declaration: I hereby declare that all the above-mentioned information is true to the best of my knowledge, and I bear the responsibility for its correctness.

SHWETA SURAN
DOB: 19th MARCH' 1990