Miriya Thanthrige Udaya Sampath Karunathilaka Perera

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Education

2017–2022 **Ruhr-University Bochum, Germany,**
Faculty of Electrical Engineering and Information Technology,
Doctor of Philosophy.

PhD Research: Low-Rank plus Sparse Minimization and Supervised Learning Concepts for Wireless Sensing based Object Identification.

2014–2016 **University of Western Ontario, Canada,**
Department of Electrical and Computer Engineering,
Master of Engineering Science.

MESc Research: Hidden Markov Model Based Intrusion Alert Prediction.

2011–2013 **University of Moratuwa, Sri Lanka,**
Department of Electronic and Telecommunication Engineering,
Postgraduate Diploma in Telecommunication, GPA: 3.42 (Out of 4.2).

2004–2008 **University of Moratuwa, Sri Lanka,**
Department of Electronic and Telecommunication Engineering,
Bachelor of Science of Engineering (1^{st} Class Honours),
Major: Electronic and Telecommunication Engineering, GPA: 3.75 (Out of 4.2).

Teaching Experience

Full Time

2024 Feb–present. **Senior Lecturer- Grade II**
Department of Electronic and Telecommunication Engineering, University of Moratuwa, Sri Lanka.

2023 Jan–2024 Feb. **Senior Lecturer- Grade II (on contract)**
Department of Electronic and Telecommunication Engineering, University of Moratuwa, Sri Lanka.

2022 Sep–2023 Jan. **Consultant**
Department of Electronic and Telecommunication Engineering, University of Moratuwa, Sri Lanka.

2014 March–2014 Aug. **Lecturer (on contract)**,
The Institute of Technology, University of Moratuwa, Sri Lanka.

Part Time

2018 Oct.–2020 Sep. **Teaching/Research Assistant**
Institute for Digital Communications Systems, Electrical Engineering and Information Technology,
Ruhr-University Bochum, Bochum, Germany.

2014 Sep.–2016 April **Teaching Assistant**
Department of Electrical and Computer Engineering, University of Western Ontario, Canada.

Professional Experience

2017 July.–2022 July. **Research Assistant**
Institute for Digital Communications Systems, Electrical Engineering and Information Technology,
Ruhr-University Bochum, Bochum, Germany.

2014 Sep.–2016 Aug **Research Assistant**
Department of Electrical and Computer Engineering, University of Western Ontario, Canada.

2010 June–2014 March **Senior Engineer-VAS Planning**
Mobitel (Pvt) LTD. 108, W.A.D Ramanayake Mawatha, Colombo 02, Sri Lanka.

2008 June– 2010 June **Associate Customer Engineer**
DMS Electronics LTD, 207/1, Dharmapala Mawatha, Colombo 7, Sri Lanka.

Publications

Peer-Reviewed Journal Publications

- **U. Sampath. K. Perera Miriya Thanthrige**, P. Jung, and A. Sezgin, "Deep Unfolding of Iteratively Reweighted ADMM for Wireless RF Sensing," Sensors., vol. 22, no. 8, April 2022.
- **U. Sampath. K. Perera Miriya Thanthrige**, J. Barowski, I. Rolfes, D. Erni, T. Kaiser and A. Sezgin, "Characterization of Dielectric Materials by Sparse Signal Processing with Iterative Dictionary Updates," IEEE Sensors Letters, vol. 4, no. 9, pp. $1-4$, Sept. 2020.
- J. Sanchez-Pastor, **U. Sampath. K. Perera Miriya Thanthrige**, F. Ilgac, A. Jimenez-Saez, P. Jung, A. Sezgin, and R. Jakoby, "Clutter Suppression for Indoor Self Localization Systems by Iteratively Reweighted Low-Rank plus Sparse Recovery," Sensors., vol. 21, no. 20, Oct 2021.
- A. M. Ahmed, **U. Sampath. K. Perera Miriya Thanthrige**, A. E. Gamal and A. Sezgin, "Deep Learning for DoA Estimation in MIMO Radar Systems via Emulation of Large Antenna Arrays," IEEE Communications Letters, vol. 25, no. 5, pp. $1559-1563$, May 2021.
- P. Hillger, M. van Delden, **U. Sampath. K. Perera Miriya Thanthrige**, A. M. Ahmed, J. Wittemeier et al., "Toward Mobile Integrated Electronic Systems at THz Frequencies," Journal of Infrared, Millimeter, and Terahertz Waves., vol. 41, no. 7, July 2020.
- V. Kuppusamy, **U. Sampath. K. Perera Miriya Thanthrige**, A. Udugama, and A. Forster, "Evaluating Forwarding Protocols in Opportunistic Networks: Trends, Advances, Challenges and Best Practices. Future Internet, vol. 11, no. 5, May 2019.

Peer-Reviewed Conference Publications

- **U. Sampath. K. Perera Miriya Thanthrige**, A. M. Ahmed and A. Sezgin, "Supervised Learning based Super-Resolution DoA Estimation Utilizing Antenna Array Extrapolation," IEEE 91^{st} Vehicular Technology Conference (VTC2020-Spring), Antwerp, Belgium, May 2020, pp. $1-5$.
- **U. Sampath. K. Perera Miriya Thanthrige** and A. Sezgin, "Tera-Hertz Sub-Layer Object Identification using MCA and Dictionary Learning," 2019 IEEE International Workshop on Mobile Terahertz Systems (IWMTS), Bad Neuenahr, Germany, July 2019, pp. $1-6$.
- **U. Sampath. K. Perera Miriya Thanthrige**, J. Samarabandu, and X. Wang, "Machine Learning Techniques for Intrusion Detection on Public Dataset," 2016 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Vancouver, BC, Canada, $15-18$ May 2016, pp. $1-4$.
- M. Al-Askary, **U. Sampath. K. Perera Miriya Thanthrige**, P. Pfeffer, L. Wachter, G. Schober, and A. Sezgin, "A Comparative Study of Low-Rank plus Sparse Matrix Decomposition and Machine Learning for Non-Destructive Air-Ultrasound Defect Detection," 2021 IEEE 29^{th} European Signal Processing Conference (EUSIPCO), Dublin, Ireland, Aug. 2021, pp. $2109-2113$.
- S. Tewes, A. A. Ahmad, J. Kakar, **U. Sampath. K. Perera Miriya Thanthrige**, S. Roth, and A. Sezgin, "Ensemble-based Learning in Indoor Localization: A Hybrid Approach," 2019 IEEE 90^{th} Vehicular Technology Conference (VTC2019-Fall), Honolulu, HI, USA, Sept. 2019, pp. $1-5$.
- Lukas B. Schafer, **U. Sampath. K. Perera Miriya Thanthrige** and A. Sezgin,"Iteratively Reweighted Nuclear Norm based Distortion Compensation for THz-TDS," 2022 IEEE International Workshop on Mobile Terahertz Systems (IWMTS), June. 2022.
- Ahmed, A. M., **U. Sampath. K. Perera Miriya Thanthrige**, A. Sezgin and F. Gini,"Resilient Sparse Array Radar with the Aid of Deep Learning," 2023 IEEE Vehicular Technology Conference (VTC2023-Spring), June. 2023.
- G. Karunarathne and **U. Sampath. K. Perera Miriya Thanthrige**, "Machine Learning & IoT based Water Distribution System for Reservoirs in Sri Lanka," 2025 Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka, 2025.
- K. D. S. Appuhamy and **U. Sampath. K. Perera Miriya Thanthrige**, "Enhancing Video Generation Based on Text-to-Image Diffusion Models Using a Multimodal Approach," 2025 Moratuwa Engineering Research Conference (MERCon), Moratuwa, Sri Lanka, 2025.