

Ali Hassan Sodhro
Faculty of Natural Science
Department of Computer Science
Research environment of Computer science
Email: ali.hassan_sodhro@hkr.se



Research

Ali Hassan Sodhro (PhD, IEEE Senior Member): He is currently working as a Senior Lecturer, Department of Computer Science, Kristianstad University, Kristianstad, Sweden.

He worked as a Lecturer at Department of Computer and System Science (DSV), Mid-Sweden University, Östersund from Jan 2021 to Sept.2021. Before that, he worked as a Postdoctoral Research Fellow at Department of Computer Science, Electrical and Space Engineering, Luleå University of Technology, Luleå, Sweden since June 2020 to Dec 2020, and visiting Lecturer in Applied Information Technology Department, Cognition and Communication division, Gothenburg University, Gothenburg, Sweden since Oct. 2020 to Jan 2021. Dr. Sodhro also worked as a Postdoctoral Research Fellow at Computer and Information Science Department, Linköping University, Linköping, Sweden from Aug.2018 to May 2020. Before that, Dr. Sodhro worked as the Postdoctoral Researcher at DISP LAB University Lumiere Lyon2, Lyon, France under Erasmus Mundu's SMARTLINK Project from Aug.2017 to July 2017.

He obtained his PhD in Computer Applications Technology from Shenzhen Institutes of Advanced Technology, Chinese Academy of Sciences (SIAT, CAS), Shenzhen, China and University of Chinese Academy of Sciences (UCAS), Beijing China in May 2016. He received both M.E in Communication Systems and Networks, and B.E in Telecommunication from one of the leading Engineering University of named, Mehran University of Engineering and Technology, Jamshoro Sindh Pakistan in 2011 and 2008, respectively.

He has published more than 80 publications in top-notch journals and conferences such as, IEEE Transactions on Industrial Informatics (TII), IEEE IoT-J, IEEE Wireless Communications Magazine, IEEE Transactions on Intelligent Transportation System (T-ITS), IEEE Sensors Journal, IEEE Consumer Electronics Magazine, IEEE Access, Information Fusion-Elsevier, FGCS-Elsevier, NCAA-Springer, IET Communications, International Journal of Communication Systems-Wiley, IEEE ICC, IEEE VTC, and so on. Besides, he published 6 book chapters in well-known publishers for instance, Springer, Elsevier, and CRC Press.

He is serving as an Associate Editor of top-notch journals such as, IEEE Transactions on Intelligent Transportation Systems (T-ITS), and IEEE Transactions on Industrial Informatics (TII), IET Electronics Letters, Telecommunications System Journal-Springer and so on.

He is researching in following areas

AI/ML for Edge/Cloud Computing

Smart and Healthcare

Internet of Things (IoT)/Internet of Medical Things (IoMT)

Physical Layer Security in 5G applications

Multimedia Transmission in Healthcare Applications

Green, Sustainable, and Reliable Healthcare Systems

Body Sensor Networks, and Wireless Sensor Networks

Energy Harvesting for Healthcare Systems

Qualifications

PhD

Employment

Senior Lecturer Computer science

Faculty of Natural Science

Kristianstad University

2021-Jul-29 → present

Department of Computer Science

Kristianstad University

2021-Jul-29 → present

Research environment of Computer science

Kristianstad University
2022-Mar-10 → present

Lecturer

Mid Sweden University
Sundsvall, SE 85170, Sweden
2021-Jan-01 → 2021-Sept-30

Lecturer

University of Gothenburg
Sweden
2020-Oct-01 → 2021-Jan-30

Postdoctoral Research Fellow

Luleå University of Technology
Sweden
2020-Aug-01 → 2020-Dec-31

Postdoctoral Research Fellow

Linköping University
Sweden
2018-Aug-01 → 2020-Aug-31

Postdoctoral Research Fellow

Université Lumière Lyon 2
Lyon, France
2017-Aug-24 → 2018-Jul-31

Research outputs

A Confidentiality-based data Classification-as-a-Service (C2aaS) for cloud security

Ali, M., Tang Jung, L., Hassan Sodhro, A., Ali Laghari, A., Birahim Belhaouari, S. & Gillani, Z., 2022-Nov-02, In: Alexandria Engineering Journal. 64, p. 749-760 12 p.

Intelligent authentication of 5G healthcare devices: A survey

Sodhro, A. H., Awad, A. I., van de Beek, J. & Nikolakopoulos, G., 2022-Sept-06, In: Internet of Things (Netherlands). 20, 2022, p. 1-25 100610.

A Systematic Review and IoMT Based Big Data Framework for COVID-19 Prevention and Detection

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A Lightweight Security Scheme for Failure Detection in Microservices IoT-Edge Networks

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Sodhro, A. H. & Sennersten, C., 2022-Jun-17, p. 1-5. 5 p.

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Towards Cognitive Authentication for Smart Healthcare Applications

Hassan Sodhro, A., Sennersten, C. & Ahmad, A., 2022-Mar-09, In: *Sensors*. 22, 6, p. 1-18 18 p., 2101.

AI-driven adaptive reliable and sustainable approach for internet of things enabled healthcare system

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Ai-enabled framework for fog computing driven E-healthcare applications

Sodhro, A. H. & Zahid, N., 2021-Dec-01, In: *Sensors*. 21, 23, p. 1-16 16 p., 8039.

Toward ML-Based Energy-Efficient Mechanism for 6G Enabled Industrial Network in Box Systems

Sodhro, A. H., Zahid, N., Wang, L., Pirbhulal, S., Ouzrout, Y., Sekhari Seklouli, A., Lira Neto, A. V., MacEdo, A. R. L. D. & Albuquerque, V. H. C. D., 2021-Oct, In: *IEEE Transactions on Industrial Informatics*. 17, 10, p. 7185-7192 8 p., 9205620.

Towards 5G-Enabled Self Adaptive Green and Reliable Communication in Intelligent Transportation System

Sodhro, A. H., Pirbhulal, S., Sodhro, G. H., Muzammal, M., Zongwei, L., Gurtov, A., De MacEdo, A. R. L., Wang, L., Garcia, N. M. & De Albuquerque, V. H. C., 2021-Aug, In: *IEEE Transactions on Intelligent Transportation Systems*. 22, 8, p. 5223-5231 9 p., 9199859.

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Toward Convergence of AI and IoT for Energy-Efficient Communication in Smart Homes

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Toward 6G architecture for energy-efficient communication in iot-enabled smart automation systems

Sodhro, A. H., Pirbhulal, S., Luo, Z., Muhammad, K. & Zahid, N. Z., 2021-Apr-01, In: *IEEE Internet of Things Journal*. 8, 7, p. 5141-5148 8 p., 9200376.

A novel adaptive battery-aware algorithm for data transmission in iot-based healthcare applications
Magsi, H., Sodhro, A. H., Zahid, N., Pirbhulal, S., Wang, L. & Al-Rakhmi, M. S., 2021-Feb-02, In: Electronics (Switzerland). 10, 4, p. 1-17 17 p., 367.

Cost-efficient service selection and execution and blockchain-enabled serverless network for internet of medical things
Lakhan, A., Ali Dootio, M., Sodhro, A. H., Pirbhulal, S., Groenli, T. M., Khokhar, M. S. & Wang, L., 2021, In: Mathematical Biosciences and Engineering. 18, 6, p. 7344-7362 19 p.

Dynamic application partitioning and task-scheduling secure schemes for biosensor healthcare workload in mobile edge cloud

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Towards Wearable Sensing Enabled Healthcare Framework for Elderly Patients

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A lightweight portable intrusion detection communication system for auditing applications

Nykvist, C., Larsson, M., Sodhro, A. H. & Gurtov, A., 2020-May-10, In: International Journal of Communication Systems. 33, 7, p. 1-16 e4327.

A Joint Deep Learning and Internet of Medical Things Driven Framework for Elderly Patients

Zhang, T., Sodhro, A. H., Luo, Z., Zahid, N., Nawaz, M. W., Pirbhulal, S. & Muzammal, M., 2020-Apr-21, In: IEEE Access. 8, p. 75822-75832 11 p., 9075231.

AI-Enabled Reliable Channel Modeling Architecture for Fog Computing Vehicular Networks

Sodhro, A. H., Sodhro, G. H., Guizani, M., Pirbhulal, S. & Boukerche, A., 2020-Apr, In: IEEE Wireless Communications. 27, 2, p. 14-21 8 p., 9085258.

Power-Management Strategies for Medical Information Transmission in Wireless Body Sensor Networks

Sodhro, A. H., Zongwei, L., Pirbhulal, S., Sangaiah, A. K., Lohano, S. & Sodhro, G. H., 2020-Mar, In: IEEE Consumer Electronics Magazine. 9, 2, p. 47-51 5 p.

An adaptive QoS computation for medical data processing in intelligent healthcare applications

Sodhro, A. H., Malokani, A. S., Sodhro, G. H., Muzammal, M. & Zongwei, L., 2020-Feb-01, In: Neural Computing and Applications. 32, 3, p. 723-734 12 p.

A decentralised approach to privacy preserving trajectory mining

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A multi-sensor data fusion enabled ensemble approach for medical data from body sensor networks

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Sodhro, A. H., Obaidat, M. S., Abbasi, Q. H., Pace, P., Pirbhulal, S., Yasar, A. U. H., Fortino, G., Imran, M. A. & Qaraqe, M., 2019-Dec-01, In: IEEE Wireless Communications. 26, 6, p. 10-17 8 p.

A Joint Transmission Power Control and Duty-Cycle Approach for Smart Healthcare System

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A novel energy optimization approach for artificial intelligence-enabled massive internet of things

Sodhro, A. H., Obaidat, M. S., Pirbhulal, S., Sodhro, G. H., Zahid, N. & Rawat, A., 2019-Jul.

Artificial Intelligence-Driven Mechanism for Edge Computing-Based Industrial Applications

Sodhro, A. H., Pirbhulal, S. & De Albuquerque, V. H. C., 2019-Jul, In: IEEE Transactions on Industrial Informatics. 15, 7, p. 4235-4243 9 p., 8658105.

Towards an optimal resource management for IoT based Green and sustainable smart cities

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Mobile edge computing based QoS optimization in medical healthcare applications

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Convergence of IoT and product lifecycle management in medical health care

Sodhro, A. H., Pirbhulal, S. & Sangaiah, A. K., 2018-Sept, In: Future Generation Computer Systems. 86, p. 380-391 12 p.

Power Control Algorithms for Media Transmission in Remote Healthcare Systems

Sodhro, A. H., Pirbhulal, S., Qaraqe, M., Lohano, S., Sodhro, G. H., Junejo, N. U. R. & Luo, Z., 2018-Jul-25, In: IEEE Access. 6, p. 42384-42393 10 p., 8419711.

5G-based transmission power control mechanism in Fog computing for internet of things devices

Sodhro, A. H., Pirbhulal, S., Sangaiah, A. K., Lohano, S., Sodhro, G. H. & Luo, Z., 2018-Apr-19, In: Sustainability (Switzerland). 10, 4, p. 1-17 1258.

An energy-efficient algorithm for wearable electrocardiogram signal processing in ubiquitous healthcare applications

Sodhro, A. H., Sangaiah, A. K., Sodhro, G. H., Lohano, S. & Pirbhulal, S., 2018-Mar-20, In: Sensors (Switzerland). 18, 3, 923.

Energy efficiency comparison between data rate control and transmission power control algorithms for wireless body sensor networks

Sodhro, A. H., Chen, L., Sekhari, A., Ouzrout, Y. & Wu, W., 2018-Jan-01, In: International Journal of Distributed Sensor Networks. 14, 1

Energy management during video transmission in wireless body sensor networks

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Energy efficiency in wireless body sensor networks

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