RONY KUMER SAHA, Ph.D. (Electrical Engineering)

RONY KUMER SAHA has been working as a Research Engineer (Postdoctoral Fellow) with the Radio and Spectrum Laboratory, KDDI Research, Inc., Japan, since 2017. He received the Ph.D. degree in Electrical Engineering from Chulalongkorn University, Thailand, in 2017, the M.Eng. degree in Information and Communications Technologies from the Asian Institute of Technology, Thailand, in 2011, and the B.Sc. degree in Electrical and Electronic Engineering from Khulna University of Engineering and Technology, Bangladesh, in 2004,

He will join as Associate Professor with the Department of Electrical and Electronic Engineering, BRAC University, Dhaka, Bangladesh, in early 2022. From September 2013 to July 2014, he was with East West University, Bangladesh. Before that, he worked as a Lecturer and was later promoted to Assistant Professor with American International University-Bangladesh (AIUB), Bangladesh, from January 2005 to August 2013.

He has research experience on mobile wireless communications in universities and industries for *about 11 years*. He has authored *about 70 peer-reviewed*, reputed, and recognized international journal and conferences papers. He also filed an international patent. He received the *Highest Evaluation* Score (Postdoctoral Fellow) for four consecutive fiscal-half years (2019-2020) at KDDI Research, Inc., Japan. His current research interests include 5G and beyond ultra-dense HetNets, licensed and unlicensed spectrum sharing, policy, and management in multiple communication systems, and millimeter-wave communications.

Previously, he served as a *member* of the Fronthaul Working Group, xRAN Forum, USA, and a *TPC Member* of the 2018 IEEE Global Communications Conference Workshops. He also served as the *Session Chair* for two sessions, namely, Radio Resource Management and Aerial Networks at the 2019 IEEE VTC-Fall, Honolulu, HI, USA, and the 2019 IEEE International Symposium on Dynamic Spectrum Access Networks Newark, Newark, NJ, USA, for the session Spectrum Sharing in 5G.

He also served as a Reviewer for a number of recognized journals, including IEEE Transactions on Wireless Communications, IEEE Transactions on Vehicular Technology, IEEE Wireless Communications, IEEE Access, Physical Communication (Elsevier), International Journal of Communication Systems (Wiley), Sensors Journal (MDPI), Symmetry Journal (MDPI), Mobile Information Systems (Hindawi), and Sustainability Journal (MDPI). He has been serving as an *Associate Editor* of the Engineering Journal, Thailand, since 2019. He is currently serving as a Steering Committee Member of IARIA ICSNC 2021.

Dr. Saha has been supporting several IARIA conferences either as a member of the technical program committee, a panelist, a steering committee member, or a tutorial speaker (see below). Further, he has made several scientific contributions to the IARIA conferences, and received a number of Best Paper Awards (including ICSNC 2020 in Portugal, ICWMC 2021 in France, and ICN 2021 in Portugal) as follows.

MEMBER

[1] **Technical Program Committee**, The Fifteenth International Conference on Systems and Networks Communications (ICSNC 2020), Porto, Portugal, 18-22 Oct. 2020.

[2] **ICSNC 2021 Steering Committee**, The Sixteenth International Conference on Systems and Networks Communications**,** October 03, 2021 to October 07, 2021 - Barcelona, Spain

PANELIST

[1] **R. K. Saha**, "Evolution Toward Spectrum Utilization-Centric Network: Addressing High Capacity with Limited Spectrum Bandwidth," *Advances in Communications Technologies Panel, SoftNet 2020,* IARIA, 18-22 October 2020, Porto, PORTUGAL, 18-28.

TUTORIAL

[1] **R. K. Saha,** "In-Building Small Cell Networks: Achieving High Capacity Indoors," *Tutorial 3, InfoWare 2021 Congress*, Nice, FRANCE, IARIA, 18-22 July 2021.

CONFERENCE PAPERS

[1] **R. K. Saha,** "On Operating Cellular Technologies in Unlicensed Spectrum Bands: A Review," in Proc. *IARIA Sixteenth International Conference on Systems and Networks Communications (ICSNC),* 03-07 October 2021, Barcelona, Spain, pp. 13-17.

[2] **R. K. Saha**, "Unlicensed Spectrum Bands for Cellular Mobile Networks-An Overview," in Proc. *IARIA Sixteenth International Conference on Systems and Networks Communications (ICSNC),* Barcelona, Spain, 03-07 October 2021, pp.7-12.

[3] **R. K. Saha,** "Power Control based Fair Coexistence of LBT-Free 5G New Radio Small Cells with WiGig Networks," in Proc. *IARIA Sixteenth International Conference on Systems and Networks Communications (ICSNC),* 03-07 October 2021, Barcelona, Spain, pp.1-6.

[4] **R. K. Saha**, "On Achieving High Capacity using Small Cells in Multistory Buildings: A Review," in Proc. *IARIA The Seventeenth International Conference on Wireless and Mobile Communications (ICWMC*), 18-22 July 2021, Nice, FRANCE, pp. 65-41. [Received Best Paper Award]

[5] **R. K. Saha**, "On Operating 5G New Radio Indoor Small Cells in the 60 GHz Unlicensed Band," in Proc. *IARIA The Seventeenth International Conference on Wireless and Mobile Communications (ICWMC),* 18-22 July 2021, Nice, FRANCE, pp. 38-43.

[6] **R. K. Saha,** "Dynamic and Opportunistic Millimeter-Wave Spectrum Access in 5G New Radio Multi-Operator Cognitive Radio Networks," in Proc. *IARIA The Seventeenth International Conference on Wireless and Mobile Communications (ICWMC),* 18-22 July 2021, Nice, FRANCE, pp. 35-38.

[7] **R. K. Saha,** "Performance Analysis of In-building Small Cell Networks: Carrier Frequency Band Perspective," in Proc. *IARIA The Twentieth International Conference on Networks (ICN 2021),* 18-22 April 2021, Porto, PORTUGAL, pp. 36-40. [Received Best Paper Award]

[8] **R. K. Saha,** "Spectrum Reuse in the Terahertz Band for In-building Small Cell Networks," in Proc. *IARIA The Twentieth International Conference on Networks (ICN 2021),* 18-22 April 2021, Porto, PORTUGAL, pp. 30-35.

[9] **R. K. Saha**, "Dynamic Spectrum Sharing in Multi-Operator Millimeter-Wave Indoor Systems," in Proc. *IARIA The Twentieth International Conference on Networks (ICN 2021),* 18-22 April 2021, Porto, PORTUGAL, pp. 27-29.

[10] **R. K. Saha,** "A Massive Millimeter-Wave Spectrum Allocation and Exploitation Technique Toward 6G Mobile Networks," in Proc. *IARIA Fifteenth International Conference on Systems and Networks Communications (ICSNC),* Porto, PORTUGAL, 18-22 October 2020, 32-41. [Received Best Paper Award]

[11] **R. K. Saha,** "Hybrid Interweave-Underlay Millimeter-Wave Spectrum Access in Multi-Operator Cognitive Radio Networks Toward 6G," in Proc. *IARIA Fifteenth International Conference on Systems and Networks Communications (ICSNC),* Porto, PORTUGAL, 18-22 October 2020, 42-48.

[12] **R. K. Saha,** "On Evaluating Spectrum Allocation Techniques in Millimeter-Wave Systems using Indoor Smalls for 5G/6G," in Proc. *IARIA Fifteenth International Conference on Systems and Networks Communications (ICSNC),* Porto, PORTUGAL, 18-22 October 2020, 28-31.

[13] **R. K. Saha,** "A New Paradigm for Spectrum Allocation in Millimeter-Wave Systems," in Proc. *IARIA Fifteenth International Conference on Systems and Networks Communications (ICSNC),* Porto, PORTUGAL, 18-22 October 2020, 14-17.

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