



**Dr. G. Aruna**

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PhD (Indian Institute of Technology  
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Joined the Institute in May 2014

## Research Interests

Wireless and Mobile communications, MIMO Systems, MM wave communications

## Teaching

Theory Courses: Signals and Systems(EC241), Probability and Random Process MA(203), Principles of Communication (EC251), Principles of Communication Lab(EC252), Mobile Communication (EC451), Communication Networks (EC351) Laboratory Courses: Signals and Systems Lab(EC242), Principles of Communication Lab(EC252)

## Publication

### Journal

- 1 S. Bhattacharyya and G. Aruna, "Radiation Pattern Analysis of Uniform Rectangular Planar Arrays for Millimeter Wave Communications: Comparative study with Uniform Linear Arrays", International Journal of Wireless Personal Communications, (2019), Springer
- 2 "BER Analysis of EGC Receiver over Correlated Nakagami-m Fading Channels with Phase Error and asynchronous CCI", International Journal of Wireless Communication and Mobile Computing, (2019),
- 3 G. Aruna, "Outage Probability of EGC Receiver Over Composite Fading Channels with Phase Error and Co-channel Interference", IETE Journal Of Research, vol. 63, no.3, (2017), pages. 421-427,
- 4 G. Aruna, "ABEP of EGC Receiver over Composite and Non-homogenous Fading Channels with Phase Error and Co-Channel Interference", IETE Journal Of Research, vol. 59, no.5, (2013), pages. 472-478,

### Conference

- 1 Bhattacharyya and G. Aruna, "Radiation Pattern Analysis of Uniform Linear Arrays for Millimeter Wave Communications", 2019 IEEE International Conference on Computer Communication and Informatics (ICCCI), (2019), Coimbatore, India
- 2 S. Bhattacharyya and G. Aruna, "Outage Probability Analysis of SNR for a MM wave Beamsteered MIMO-MRC System", IEEE International Conference on Wireless Communications, Signal Processing and Networking (WISPNET), Tamil Nadu, India, (2019),
- 3 G. Aruna; Manash Pratim Barman, "Performance Analysis of Advanced Diversity Receivers in the Presence of Multiple Interferers", IEEE-2018 International Conference on Wireless Communications, Signal Processing and Networking (WISPNET), (2018), pages. 1-5,
- 4 G. Aruna and S. Bhattacharyya, "Capacity and SNR Analysis of a Millimeter Wave Cellular Network with Phased Antenna Array", in Proc. 2018 IEEE- International Conference on Computer Communication and Informatics (ICCCI), Coimbatore, India, (2018), pages. 1-5,
- 5 G. Aruna, "BER of equal gain combiner over composite and non-homogenous channels with co-channel interference and phase estimation error(Corrected version)", IEEE- International Conference on Computer Communication and Informatics (ICCCI), (2017), pages. 1-5,
- 6 G. Aruna, "Performance Analysis of SSC and SEC Diversity Receivers in indoor MM wave Network", IEEE-International Conference on Wireless Communications, Signal Processing and Communication Networks, (2016), pages. 22-24, 2104-2108, Chennai, Tamil Nadu
- 7 G. Aruna, "PDF methodology of analysis of L branch equal gain combiner with carrier phase error and CCI over Nakagami-m fading", IEEE International Conference on Computing and Network Communications (CoCoNet'15), (2015), pages. 505-510.,
- 8 G. Aruna, "Performance analysis of MRC receiver with channel estimation error and co-channel interference in Nakagami-m fading channel", International Conference on Computational Intelligence and Computing Research (ICICR), (2014), pages. 1-4, IEEE Conference Publications
- 9 G. Aruna and P. R. Sahu, "Performance Analysis of MRC Receiver with Channel Estimation error and CCI in Nakagami-m Fading Channels", National Conference on Communications, NCC, (2012), pages. 3-5, IIT Kharagpur, India
- 10 G. Aruna and P. R. Sahu, "ABER of Equal Gain Combiner over Correlated Hoyt Fading Channels with Phase Error and Co-Channel Interference", Annual IEEE India Conference, Indicon, (2012), pages. 936-940, Kochi India

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