

## CONTACT

✉ dibbaroy@gmail.com  
🌐 Website  
in LinkedIn  
G Google Scholar  
☎ +91 9547898525

## SKILLS

Problem Identification 3+ yrs  
Subject Proficiency 5+ yrs  
Research 4+ yrs  
Presentation  
Collaboration 5+  
Teaching 6+ yrs

## TOOLS

OMNet++ 5+ yrs  
Machine and Deep Learning 2+ yrs  
Python and Matlab 6+ yrs  
C++ 10+ yrs  
Linux 5+ yrs  
Network Emulation (SDN+Dockers) 1+ yrs

# DIBBENDU ROY

Research Associate - IIT Kharagpur  
(5G and Beyond)

## RESEARCH INTERESTS

Communication Networks, Machine and Deep learning, Distributed Optimization, Queuing and Game Theory.

## EDUCATION

Joint Ph. D. - Electrical and Electronic Engineering  
University of Melbourne and IIT Kharagpur

Thesis Submitted

Thesis Title: Architecture and Policy Design for Next-generation Access Networks

M. Tech. - Telecommunication Systems Engineering.  
Department of Electronics and Electrical Communication, IIT Kharagpur, India

2015 - 2017

Passed with 9.54 CGPA

B. Tech. - Electronics and Communication Engineering  
NIT Durgapur, India

2009 - 2013

Passed with 8.62 CGPA

## PUBLICATIONS

Related to PhD - Thesis

Achieving AI-enabled Robust End-to-End Quality of Experience over Backhaul Radio Access Networks  
IEEE Transactions on Cognitive Communication and Networking, 2022

IEEE Transactions

Status: Accepted and under Production

Achieving QoS for bursty uRLLC applications over passive optical networks  
Journal of Optical Communications and Networking Vol 14, Issue 5, 411-425, 2022

OSA/IEEE

Status: Published

A Cost-effective architecture and throughput efficient dynamic bandwidth allocation protocol for fog computing over EPON  
IEEE Transactions on Green Communications and Networking Vol 4, Issue 4, 998-1009, 2020

IEEE Transactions

Status: Published

# ACHIEVEMENTS

MIPA - Melbourne India Post Graduate Academy

Selected for Joint-PhD at University of Melbourne in collaboration with IIT Kharagpur.

M.Tech

Telecommunication Systems Engineering

Second among a class of 28. Selected for Qualcomm in Communications Profile in Campus Placements

GATE - Graduate Aptitude Test in Engineering

Electronics and Communication Engineering (ECE)

Qualified in 2015 with 800 score in general category (Top 1% among 200000 candidates appeared in the National Level Exam)

AIEEE

Ranked among top 1% out of 1000000 candidates in All India Engineering Entrance Examination

## Analysis of Cognitive Radio Networks

Queuing Analysis of QoS Aware Microwave Power Transfer Enabled CR-IoT Network

IEEE Transactions on Wireless Communications, 2022

Status: Published

IEEE Transactions

Queuing Analysis of Opportunistic Cognitive Radio IoT Network with Imperfect Sensing

IEEE Transactions on Cognitive Communication and Networking, 2022

Status: Under Minor Revision

IEEE Transactions

## Energy-Efficiency in Passive Optical Networks

Protocol Design for Energy Efficient OLT in TWDM-EPON Supporting Diverse Delay Bounds

IEEE Transactions on Green Communications and Networking Vol 5, Issue 3, 1438-1450, 2021

Status: Published

IEEE Transactions

SLA-aware protocol design for energy-efficient OLT transmitter in TWDM-EPON

IEEE Transactions on Green Communications and Networking 5 (4), 1961-1973, 2021

Status: Published

IEEE Transactions

Online scheduling protocol design for energy-efficient TWDM-OLT

Journal of Optical Communications and Networking 10 (3), 260-271, 2018

Status: Published

OSA/IEEE

## Economic Analysis in Passive Optical Networks

Economics of Resilient TWDM PONs

Journal of Lightwave Technology 38 (8), 2114-2126, 2020

Status: Published

OSA/IEEE

Economic analysis of TWDM PONs: A sustainability and policy-making perspective

Journal of Optical Communications and Networking 11 (3), 79-94, 2019

Status: Published

OSA/IEEE

# WORKSHOPS & CONFERENCES

A cost-effective and energy-efficient all-optical access metro-ring integrated network architecture

ONDM 2018

## WORK EXPERIENCE

Research Associate

Feb 22 - Current

Project - 5G and Beyond (MeitY), IIT Kharagpur

- Attend 3GPP and ITU meetings to understand the dynamics of future networking technologies
- Propose new use-cases and solutions for next-generation networks
- Contribute in terms of Publications and Patents

Demonstrator for Signal Processing

Feb 21 - Jun 21

University of Melbourne

- Teaching Support and Undertake Workshops for EEE Graduates

Demonstrator for Communication Networks

Aug 20 - Jan 21

University of Melbourne

- Teaching Support and Undertake Workshops for EEE Graduates

Tutor and Teaching Assistant for Communication Networks and Analog Communication

Aug 18 - Current

NPTEL, India

- Designing Course Material, Assignments and Final Papers for online courses

Research Intern

Apr 16 - Jun 16

Airbus Research, Bangalore, India

- Explore Deep Learning Techniques to detect and classify SAR Images in Fighter Planes

Project Engineer

Aug 13 - Oct 14

Wipro Technologies, Bangalore and Chennai

- Development and Customization of CRM Oracle On Demand

## EXTRACURRICULAR

- Playing Keyboard/Piano.
- Playing Football/Soccer and Table Tennis.
- Occasionally solving math problems and answering queries in forums like stackexchange.