

Debarshi Patanjali Ghoshal | CV

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Education

McGill University <i>Doctor of Philosophy in Electrical Engineering</i> Thesis: Finite-interval estimation using double-sided kernels and differential invariants Supervisor: Prof. Hannah Michalska	Montreal, Canada 2014 – Present
Indian Institute of Technology Kanpur <i>Master of Technology in Electrical Engineering</i> Thesis: Robot learning from a human expert through modified kinesthetic teaching Supervisor: Prof. Laxmidhar Behera	Kanpur, India 2012 – 2014
Jadavpur University <i>Bachelor of Electrical Engineering</i> Elective: Control Systems Engineering	Kolkata, India 2007 – 2011

Experience

Research	
Aerial Technologies <i>Industrial R&D</i> Applying Feature Engineering in Artificial Intelligence/Machine Learning to solve practical problems in the field of WiFi Motion Analytics; the project started as a Research Internship, which was later extended into a paid position as an independent Research Scientist Consultant.	Montreal, Canada Oct 2018 – Present
Jadavpur University <i>Research Project</i> Project title: Robust controller design for boiler burning process using RBode plot Supervisor: Prof. Smita Sadhu (Department of Electrical Engineering, Jadavpur University) The work resulted in a peer-reviewed conference paper.	Kolkata, India Oct 2011 – May 2012
Indian Institute of Science, Bangalore <i>Summer Internship</i> Project title: Waypoint navigation system for unmanned aerial vehicles (UAV) Supervisor: Prof. Seetharama M. Bhat (Department of Aerospace Engineering, IISc.)	Bangalore, India May 2010 – Jun 2010
Jadavpur University <i>Research Project</i> Project title: Neural network approach for automatic number plate recognition (ANPR) Supervisor: Prof. Anjan Rakshit (Department of Electrical Engineering, Jadavpur University) The work resulted in a peer-reviewed conference paper, which also won the best-paper prize of the conference.	Kolkata, India May 2009 – Apr 2010

Teaching.....

McGill University **Montreal, Canada**
Graduate Teaching Assistant, Electrical & Computer Engineering Dept. *Sep 2017 – Dec 2018*
ECSE 404 Control Systems (Fall 2018, Fall 2017)

Indian Institute of Technology Kanpur **Kanpur, India**
Teaching Assistant, Electrical Engineering Department *Aug 2012 – Apr 2014*
Control System Analysis (Spring 2014, Spring 2013)
Basics of Modern Control Systems (Fall 2013)
Intelligent Informatics Lab (Fall 2012)

Miscellaneous.....

McGill University **Montreal, Canada**
Grader, Electrical and Computer Engineering Department *Sep 2016 – Dec 2018*
ECSE 500 Mathematical Foundations of Systems (Fall 2018)
ECSE 443 Introduction to Numerical Methods in Electrical Engineering (Winter 2017)
ECSE 404 Control Systems (Fall 2016)

Honours & Awards

NSERC Engage Plus Fellowship *2019 – 2020*
Natural Sciences and Engineering Research Council of Canada

NSERC Engage Fellowship *2018 – 2019*
Natural Sciences and Engineering Research Council of Canada

Lorne Trottier Engineering Graduate Fellowship *2014 – 2017*
McGill University - Faculty of Engineering

Geoff Hyland Fellowship in Engineering *2014 – 2017*
McGill University - Faculty of Engineering

Graduate Excellence Fellowship - Engineering *2014 – 2017*
McGill University - Faculty of Engineering

MHRD Scholarship *2012 – 2014*
Ministry of Human Resource Development, Govt. of India

Selected Publications

D. P. Ghoshal and H. Michalska, "Finite interval estimation of LTI systems using differential invariance, instrumental variables, and covariance weighting," in *2020 American Control Conference (ACC)*, pp. 731–736, IEEE, 2020.

D. P. Ghoshal and H. Michalska, "Finite-interval kernel-based identification and state estimation for LTI systems with noisy output data," in *2019 American Control Conference (ACC)*, pp. 4982–4989, IEEE, 2019.

D. P. Ghoshal, S. Sinha, and H. Michalska, "Algebraic nonlinear identification and output tracking control of synchronous generator using differential flatness," in *2019 23rd International Conference on System Theory, Control and Computing (ICSTCC)*, pp. 206–211, IEEE, 2019.

