

Debarshi Patanjali Ghoshal | CV

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Education

McGill University <i>Doctor of Philosophy in Electrical Engineering</i> Thesis: Estimator design for dynamical systems with invariance 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>Research Internship (NSERC Engage Fellowship)</i> Applying Feature Engineering in Artificial Intelligence/Machine Learning to solve practical problems.	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 was published in an international journal.	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 <i>Graduate Teaching Assistant, Electrical & Computer Engineering Dept.</i> ECSE 404 Control Systems (Fall 2018, Fall 2017)	Montreal, Canada Sep 2017 – Dec 2018

Indian Institute of Technology Kanpur

Teaching Assistant, Electrical Engineering Department
Control System Analysis (Spring 2014, Spring 2013)
Basics of Modern Control Systems (Fall 2013)
Intelligent Informatics Lab (Fall 2012)

Kanpur, India*Aug 2012 – Apr 2014***Miscellaneous**.....**McGill University**

Grader, Electrical and Computer Engineering Department
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)

Montreal, Canada*Sep 2016 – Dec 2018***McGill University**

Exam Delivery Person, Office for Students with Disabilities

Montreal, Canada*Dec 2016 – Mar 2018***McGill University**

Invigilator, Office for Students with Disabilities

Montreal, Canada*Nov 2015 – Dec 2016***PricewaterhouseCoopers India**

Consultant

Kolkata, India*Jul 2011 – Sep 2011***Honours & Awards**

Lorne Trottier Engineering Graduate Fellowship

McGill University - Faculty of Engineering

*2014 – 2017***Geoff Hyland Fellowship in Engineering**

McGill University - Faculty of Engineering

*2014 – 2017***Graduate Excellence Fellowship - Engineering**

McGill University - Faculty of Engineering

*2014 – 2017***MHRD Scholarship**

Ministry of Human Resource Development, Govt. of India

*2012 – 2014***Publications**

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

A. Pandey, D. P. Ghoshal, and H. Michalska, "Variational approach to joint linear model and state estimation," in *2018 Annual American Control Conference (ACC)*, pp. 3520–3525, IEEE, 2018.

D. Sridhar, D. P. Ghoshal, and H. Michalska, "B-splines in joint parameter and state estimation in linear time-varying systems," in *2018 Annual American Control Conference (ACC)*, pp. 3508–3513, IEEE, 2018.

D. P. Ghoshal, K. Gopalakrishnan, and H. Michalska, "Kernel-based adaptive multiple model target tracking," in *Control Technology and Applications (CCTA), 2017 IEEE Conference on*, pp. 1338–1343, IEEE, 2017.

D. P. Ghoshal and H. Michalska, "Double-sided kernel observer for linear time-varying systems," in *Control Technology and Applications (CCTA), 2017 IEEE Conference on*, pp. 922–927, IEEE, 2017.

D. P. Ghoshal, K. Gopalakrishnan, and H. Michalska, "Algebraic parameter estimation using kernel representation of linear systems," *IFAC-PapersOnLine*, vol. 50, no. 1, pp. 12898–12904, 2017.

D. P. Ghoshal, K. Gopalakrishnan, and H. Michalska, "Using invariance to extract signal from noise," in *American Control Conference (ACC), 2017*, pp. 2588–2593, IEEE, 2017.

D. P. Ghoshal, N. Das, S. Dutta, and L. Behera, "Robot learns from human teacher through modified kinesthetic teaching," *IFAC Proceedings Volumes*, vol. 47, no. 1, pp. 773–780, 2014.

D. P. Ghoshal and S. D. Gupta, "Robust controller design for boiler burning process using RBode plot," *International Journal of Electrical, Electronics and Computer Engineering*, vol. 1, no. 2, pp. 11–14, 2012.

A. Roy and D. P. Ghoshal, "Number plate recognition for use in different countries using an improved segmentation," in *Emerging Trends and Applications in Computer Science (NCETACS), 2011 2nd National Conference on*, pp. 1–5, IEEE, 2011.

Languages

English: Fluent

Bengali: Native

Hindi: Fluent

French: Basic

Computer skills

Programming: Python, MATLAB, C, Fortran

Publishing: LaTeX

Library: Scikit-learn, NumPy, SciPy, Matplotlib

Miscellaneous: Git, Linux

Volunteer work

Reviewer:

American Control Conference (2019)

Computer Science and Electronic Engineering Conference (2018, 2015)

International conference on Advances in Control and Optimization of Dynamic Systems (2014)

Elected position: Vice-President of Facilities

McGill University - Electrical Engineering Graduate Student Society (EEGSS)

2016 – 2017

International Student Buddy

McGill University - International Student Services

2015 – 2017