DR. IBRAHIM MUSTAFA MEHEDI

Associate Professor, Electrical and Computer Engineering Dept., King Abdulaziz University

Education

Degree	*Field*	*Institution*	*Year*
PhD	Electrical Engg. and Information Systems	The University of Tokyo, Tokyo	2011
MS	Aerospace Engineering	University Putra Malaysia	2005
BS	Electrical and Electronic Engineering	Rajshahi Univ.of Engg.& Tech.Bangladesh	2000

Academic Experience

From	*To*	*Institution*	*Rank*	*Title*	*Ful/Ptl Time*
2003	2006	University Putra Malaysia (UPM)	Research Assistant		Full Time
2006	2008	King Fahd Univ of Petroleum & Minerals	Lecturer		Full Time
2008	2011	University of Tokyo	Research Assistant		Full Time
2009	2011	Japan Aerospace Exploration Agency	Research Assistant		Part Time
2011	2012	Japan Aerospace Exploration Agency	Postdoc. Researcher		Full Time
2012	2018	King Abdulaziz University	Assistant Professor		Full Time
2018	Date	King Abdulaziz University	Associate Professor		Full Time

Non Academic Industrial Experience *(including Consultations)*

From	***To***	***Company/Entity***	***Title***	***Position Description***	***Ful/Pt Time***
2001	2003	*Coca Cola* Bottling Plant, Comilla, Bangladesh	Maintenance Engineer	Industrial Machineries maintenance and Troubleshooting	Full Time
2012	2012	Shapla International Company Ltd., Kanagawa, Japan	Engineering Consultant	New Project Consultation	Full Time

Major Funded Research Projects as PI and Patents from the Past Five Years

	Project Title	**Funding Agency**	**Project Code**	**Period**	**Status**
1.	Robust Generalized Dynamics Inversion (RGDI) control scheme for autonomous system	Deanship of Scientific Research (DSR), King Abdulaziz University, KSA	1440-135-382 **(PI)**	9 months	Partially Executed
2.	Generalized dynamics inversion (GDI) control scheme for different physical system- Simulation and Implementation	Deanship of Scientific Research (DSR), King Abdulaziz University, KSA	1439-135-624 **(PI)**	9 months	Partially Executed
3	III-nitride based Double Gate Metal-Oxide Semiconductor Field Effect Transistors (DG-MOSFETs)	Deanship of Scientific Research (DSR), King Abdulaziz University, KSA	1437-135-419 **(PI)**	9 months	Executed
4.	State-Feedback Control System Design and Simulation for a Hybrid System	Deanship of Scientific Research (DSR), King Abdulaziz University, KSA	1437-135-D-150 **(PI)**	9 months	Executed
5	Important issues towards the fabrication of InGaN-based Solar cells	Deanship of Scientific Research (DSR), King Abdulaziz University, KSA	1437-135-D-41 **(PI)**	9 months	Executed

Certifications and Professional Registrations: --

Current Membership in Professional Societies and Organizations

Honours and Awards

- Merit Scholarship from Board of Intermediate & Secondary Education, Jessore, Bangladesh for High School Education – Pre-Engineering Education from 1988 to 1991.
- Japanese Government Scholar: Japan Government, for PhD studies at the The University of Tokyo, Japan from 2008 to 2011.
- Marie Curry Fellowship from the University of Bucharest in 2008
- Best Paper Award of the *2nd International Conference on Electrical Information and Communication Technology (EICT), KUET, Khulna, Bangladesh, 10-12 December 2015* for the following paper:Ibne Sabid, Md. Soyaeb Hasan, Md. Fahim-Al-Fattah and Md. Rafiqul Islam, Ibrahim M. Mehedi, "Effect of Dislocation Density on the Performance of InGaN-Based MJ Solar Cell: Analytical Approach".

Institutional and Professional Services *(administration, committees, units, etc.)*

- Member, The Japan Society for Aeronautical and Space Sciences – JSASS (to be renewed)
- Member, Institute of Electrical and Electronic Engineers – IEEE (to be renewed)
- Member, The American Institute of Aeronautics and Astronautics - AIAA (to be renewed)

Principal Publications/Presentations from the Past Five Years

1. U. M. Al-Saggaf, **Ibrahim M. Mehedi**, R. Mansouri, M. Bettayeb, "Rotary Flexible Joint Control by Fractional Order Controllers" International Journal of Control, Automation and Systems, Vol. 15, Issue 6, pp 2561-2569, Dec. 2017.
2. **Ibrahim M. Mehedi,** Ubaid M. Al-Saggaf, Rachid Mansouri and Maamar Bettayeb "Two degrees of freedom fractional controller design: Application to the ball and beam system," *MEASUREMENT*, vol. 135, pp. 13-22, 2019.
3. **Ibrahim M. Mehedi**, M.F. Hossain, H. Okada, Md. Shofiqul Islam, " Nano-structural variation of highly aligned anodic Titania nanotube arrays for gas phase photocatalytic application," Journal of Photochemistry and Photobiology A: Chemistry, Vol. 335, pp 200-210, Feb. 2017.
4. U. M. Al-Saggaf, **Ibrahim M. Mehedi**, R. Mansouri, M. Bettayeb, "State Feedback with Fractional Integral Control Design Based on the Bode's Ideal Transfer Function," International Journal of Systems Science, Vol. 47, Issue 1, p149-161, Jan. 2016.
5. **Ibrahim M. Mehedi**, Abdulaziz Al-Sareef, M.R. Islam, M.T. Hasan "GaN-based Double Gate sub-10 nm MOSFETs: Effects of Gate Work Function". Journal of Computational Electronics, Vol. 17, Issue 02, pp. 663-669, Jun. 2018.
6. Uzair Ansari, **Ibrahim M. Mehedi**, A.H. Bajodah, Ubaid M. Saggaf "Positional Control of Rotary Servo Cart System using Generalized Dynamic Inversion" *Journal of Vibroengineering*, Vol. 20, Issue 6, pp. 2403-2413, DOI: 10.21595/jve.2018.19403, 2018**.**
7. **Ibrahim M. Mehedi**, M.S. Hasan, M.R. Islam and A.M. Dobaie "Temperature Dependent Inhomogeneous Optical Behavior of AlInGaN Quaternary Alloy" Journal of Optical Technology, Vol. 85, Issue 1, pp. 12-16, Jan. 2018.
8. **Ibrahim M. Mehedi,** Ubaid M. Al-Saggaf, Rachid Mansouri and Maamar Bettayeb Khalid Munawar and Masaru Uchiyama, "Stabilization of a double inverted rotary pendulum through fractional order integral control scheme," *International Journal of Advanced Robotic Systems*, Accepted, Mar 2019.
9. **Ibrahim M. Mehedi**, "State feedback based fractional order control scheme for linear servo cart system" Journal of Vibroengineering, Vol. 20, Issue 1, pp. 782-892, Feb. 2018.
10. **Ibrahim M. Mehedi**, "Full state-feedback solution for a flywheel based satellite energy and attitude control scheme" Journal of Vibro Engineering, Vol. 19, Issue 5, p. 3522-3532, Aug. 2017.
11. **Ibrahim M. Mehedi**, "Time Varying Back Propagating Algorithm for MIMO Adaptive Inverse Controller," (IJACSA) International Journal of Advanced Computer Science and Applications, Vol. 8, Issue 2, Feb. 2017.