

Name: Dr. Iftekhar Ibne Basith

Title/ Position: Assistant Professor

Department: Engineering Technology

College of Sciences and Engineering Technology (COSET)

Degrees Earned:

1. PhD, Electrical and Computer Engineering, University of Windsor, Windsor, ON, Canada
2. MASc, Electrical and Computer Engineering, University of Windsor, Windsor, ON, Canada
3. BSc Engineering, Computer Science and Engineering, Shahjalal University of Science and Technology, Sylhet, Bangladesh.

Work or Professional Experiences

- a. Assistant Professor, Tenure Track (Jan 2017 – Present)
Department of Engineering Technology (ETEC)
Sam Houston State University (SHSU), Huntsville, TX, USA.
- b. Visiting Assistant Professor (Aug, 2016 – Dec, 2016)
Department of Electrical and Computer Engineering and Computer Science (ECECS)
University of New Haven, West Haven, CT, USA.
- c. Graduate Teaching and Research Assistant (Sep 2009 – Aug 2016)
Department of Electrical and Computer Engineering
University of Windsor, Windsor, ON, Canada.
- d. Lecturer (Nov 2005 – June 2007)
Department of Computer Science and Engineering (CSE)
Shahjalal University of Science and Technology (SUST), Sylhet, Bangladesh
- e. Lecturer (Jan 2005 – Nov 2007)
Department of Computer Science and Engineering (CSE)
Leading University, Sylhet, Bangladesh

Professional Licensure and Certifications:

FANUC Certified Instructor

AMATROL Certified Trainer

Peer-Review Publications and Artistic Performances/Exhibitions

- Published Article/ Journal
 - a. **Iftekhar Ibne Basith**, Esrafil Jedari, and Rashid Rashidzadeh, “A Contactless Probe for Utilizing Inductive Coupling”, in the Elsevier Microelectronics Journal, Volume 63, March 2017, Page(s) 1-7.
 - b. Tareq Mohammad Supon, **Iftekhar Ibne Basith**, Esam Abdel-Raheem, and Rashid Rashidzadeh, “Efficient Integrated Bus Coding Scheme for Low-Power I/O”, published in the Elsevier AEUE – International Journal of Electronics and Communications, July 2017.
 - c. **Iftekhar Ibne Basith**, Rashid Rashidzadeh, “Contactless Test Access Mechanism via Capacitive Coupling for TSV Based 3D ICs”, in IEEE Transactions on Instrumentation and Measurement (TIM), 65(1): 88-95 (2015).

- d. **Iftekhar Ibne Basith**, Nabeeh Kandalraft, Rashid Rashidzadeh, Majid Ahmadi, "Charge-Controlled Readout and BIST Circuit for MEMS Sensors", IEEE Transactions on CAD (TCAD) of Integrated Circuits and Systems, 32(3): 433-441 (2013).
- e. Nabeeh Kandalraft, **Iftekhar Ibne Basith** and Rashid Rashidzadeh, "Low-Contact Resistance Probe Card using MEMS Technology", IEEE Transaction for Instrumentation and Measurement (TIM), 63(12): 2882-2889 (2014).
- Published Conference Publications
 - f. **Iftekhar Ibne Basith**, and Junkun Ma, "Use of FANUC robots in Manufacturing Curriculum", published in the 2019 International Mechatronics Conference and Exhibition, Oklahoma State University, Stillwater, OK, October 23-25, 2019.
 - g. **Iftekhar Ibne Basith**, and Junkun Ma, "Integrating a FANUC robot with an EMCO machining center", published in the 11th International Conference on Engineering and Computer Education at University of Minho, Guimarães, Portugal, September 8-11, 2019.
 - h. **Iftekhar Ibne Basith**, Kali Johnson, Andres Aguirre, and Faruk Yildiz, "Ultrasonic Alarm Glove", published in the 126th ASEE Annual Conference and Exposition at Tampa, FL, June 15-19, 2019.
 - i. Reg Recayi Pecen, Faruk Yildiz and **Iftekhar Ibne Basith**, "An Effective Industry-University Partnership to Develop Tomorrow's Workforce", published in the 125th ASEE Annual Conference and Exposition at Salt Lake City, UT, June 24-27, 2018.
 - j. **Iftekhar Ibne Basith**, Tareq Mohammad Supon, Esam Abdel-Raheem, And Rashid Rashidzadeh, "Comparative Study on Bus-Coding Schemes and Improvement on SINV Coding", in the proceedings of IEEE 28th International Conference on Microelectronics (ICM), December 17-20, 2016, Cairo, Egypt, page(s): 17-20.
 - k. **Iftekhar Ibne Basith**, Rashid Rashidzadeh, and Esam Abdel-Raheem, "Contactless Detection of Faulty TSV in 3D IC via Capacitive Coupling" in proceedings of the IEEE 58th International Midwest Symposium on Circuits and Systems (MWSCAS) 2015, Colorado State University, Fort Collins, Colorado, Aug 2-5, 2015.
 - l. Mohammed Alamgir, **Iftekhar Ibne Basith**, Tareq Mohammad Supon, Rashid Rashidzadeh, "Improved Bus-Shift Coding for Low-Power I/O" in proceedings of the 2015 IEEE International Symposium on Circuits and Systems (ISCAS), May 24-27, 2015, Lisbon, Portugal.
 - m. R. Rashidzadeh, **I.I. Basith**, "A Test Probe for TSV using Resonant Inductive Coupling" in IEEE International Test Conference (ITC), Publication Year: 2013, DOI: 10.1109/TEST.2013.6874619, Page(s): 1- 6.
 - n. **Iftekhar Ibne Basith**, Tareq Muhammad Supon, Ajit Muhury, Rashid Rashidzadeh and Majid Ahmadi, "Performance Enhancement of Single Electron Junction 1-bit Full Adder", in the 18th IEEE International Conference on Electronics, Circuits and Systems (ICECS), 2011 in Beirut, Lebanon, December 11-14, 2011, Page(s) 157–160.
 - o. N. Kandalraft, **I. Basith**, R. Rashidzadeh, and M. Ahmadi, "High Speed Test Interface Module using MEMS Technology", accepted in the IEEE International Symposium on Circuits and Systems (ISCAS) in Rio de Janeiro, Brazil, May 15 - 18, 2011. (withdrawn)

- p. **Iftekhar Ibne Basith**, Nabeeh Kandalajt and Rashid Rashidzadeh, "Built-in Self-Test for Capacitive MEMS using a Charge Control Technique", published in the 19th IEEE Asian Test Symposium (ATS), Shanghai University, China, December 1-4, 2010, Page(s): 135-140.
- q. N. Kandalajt, **I. Basith**, R. Rashidzadeh, "A MEMS Based Device Interface Board", published in the IEEE International Test Conference (ITC) 2010, October 31 - November 05, 2010, Austin, Texas, USA.
- Published/ Accepted Abstracts:
 - n. **Iftekhar Ibne Basith**, Emanuel Sanchez, and Bigyan Subedi, "SeaKatz – an Underwater Robot", accepted in the 127th ASEE Annual Conference and Exposition at Montreal, QC, Canada, June 21-24, 2020.
 - o. **Iftekhar Ibne Basith**, and Brandon Marroquin, "Design and Development of Simple Robotic Arm", accepted in the 127th ASEE Annual Conference and Exposition at Montreal, QC, Canada, June 21-24, 2020.
 - p. **Iftekhar Ibne Basith**, Junkun Ma and Faruk Yildiz, "Certification and Training for Automation and/or Mechatronics", accepted in the 127th ASEE Annual Conference and Exposition at Montreal, QC, Canada, June 21-24, 2020.
 - q. Junkun Ma, and **Iftekhar Ibne Basith**, "Integration of an Industrial Robot with a CNC Machining Center", accepted in the 127th ASEE Annual Conference and Exposition at Montreal, QC, Canada, June 21-24, 2020.
 - r. **Iftekhar Ibne Basith**, and Faruk Yildiz, "New Methods to Reduce the Bus Switching Activities to Minimize Power Consumption", in the 7th International Symposium on Energy, North Sea Conference and Journal, August 13-17, 2017, Manchester, UK.
 - s. Faruk Yildiz, Keith Coogler and **Iftekhar Ibne Basith**, "Design of a Hybrid Solar Photovoltaic and Thermal Unit to Teach How Weather Affects to the Power Characteristics of Solar Modules", in the 7th International Symposium on Energy, North Sea Conference and Journal, August 13-17, 2017, Manchester, UK.
- Research Monographs and Technical Reports:
 - a. **Iftekhar Ibne Basith**, "Design and Analysis of a Charge Pump Phase Locked Loop (CPPLL) using CMOS 65nm technology", submitted to the Research Center for Integrated Microsystems (RCIM) lab at University of Windsor as a technical report.
 - b. **Iftekhar Ibne Basith**, ASM Mafizul Islam, Shaikh O. Ali, Asif Iqbal Ahmed and Tareq Muhammad Supon, "Design of a Capacitive Micromachined Ultrasonic Transducer (CMUT) with Silicon Nitride (Si_3N_4) Hexagonal Diaphragm", presented in the RCIM lab for Advanced MEMS topics.

Professional Memberships:

1. Member, IEEE: 94353103 (2017 - Present)
2. Professional Member, American Society for Engineering Education – ASEE, Gulf Southwest Section: 103302 (2017 - Present)

Professional Services:

- Reviewer
 1. IEEE Transactions on Instrumentation & Measurement (TIM) 2014 - Present
 2. IEEE Midwest Symposium on Circuits and Systems (MWSCAS), 2017 - Present
 3. Journal of Engineering Technology (JET), 2017 – Present
 4. IET Circuits, Devices and Systems, 2018 – Present
 5. ASEE Conference Reviewer, 2017 - Present
- SHSU Committees:
 - a. Engineering Technology (ETEC) Ambassadors and Outreach Committee – Advisor
 - b. Saturdays@Sam – Coordinator
 - c. College of Science and Engineering Technology (COSET) Undergraduate Research Committee - Member
 - d. Emeritus Faculty Evaluation Committee - Member
 - e. Accreditation Program Assessment Committee (SACS & ABET) - Member
 - f. ETEC Scholarship Committee - Member
 - g. Faculty Merit/ FES Committee – Member
 - h. ECET/ETEE Industrial Advisory Board Committee-Member
 - i. Annual ETEC Honors Banquet - Member
 - j. ETEC Marketing Committee - Member
 - k. Faculty/Staff Search Committee – Member
 - l. ETEC Nomination Committee - Member

Funded and or Submitted External/Internal Grants

United States Department of Agriculture (USDA)	Federal	Research	Sam Houston State University	Applied, due April 2020
Office of Research and Sponsored Programs Pilot Fund	Institutional	Research	Sam Houston State University	Applied, Due March 2020
ASEE Undergraduate Research Funding	Federal/Industry	Research	Sam Houston State University	2019/10 – 2020/06
Office of Research and Sponsored Programs Pilot Fund	Institutional	Research	Sam Houston State University	2019/08 – 2020/07
NSERC CGS Award	Federal	Research	University of Windsor	2012/09 – 2015/08
Ontario Graduate Scholarship (OGS)	Provincial	Research	University of Windsor	2011/09 – 2012/08
Ontario Graduate Scholarship (OGS)	Provincial	Research	University of Windsor	2015/09 – 2016/08

Peer-Reviewed Presentations/Posters

- a. N. Kandalaf, **I. Basith**, R. Rashidzadeh, Majid Ahmadi (October 10-11, 2012) “High Density MEMS Probe Card for High-Speed Wafer Level Testing”, presented in the CMC TEXPO research competition 2012, Toronto, ON, Canada.

- b. **Iftekhar I. Basith**, N. Kandalaft, R. Rashidzadeh and M. Ahmadi, “A New Integrated Readout and BIST Solution for MEMS Sensors”, presented in the CMC TEXPO research competition 2011, October 19-20, 2011, Gatineau, QC, Canada.
- c. **Iftekhar I. Basith**, N. Kandalaft, R. Rashidzadeh and M. Ahmadi, “A New BIST Architecture for MEMS Fault Detection”, presented in the CMC TEXPO research competition 2010, October 4, 5 2010, Ottawa, ON, Canada.

Other Competencies/ Leadership

- a. **Advisor, KatatroniX Robotics Club (2018-Present)**, Sam Houston State University, TX, USA.
- b. **President (2013-2016), Vice President – Finance, Operations and Human Resources (2011-2012), and Graduate Student Representative (2009-2010)** in Graduate Student Society (GSS) at University of Windsor, Windsor, ON, Canada.
- c. **General Secretary (2015-2016), Assistant General Secretary (2011-2015), and Student Affairs Secretary (2009-2011)** in Bangladesh Canada Association, Windsor-Essex (BCAWE) at Windsor, ON, Canada.
- d. **General Secretary (2002-2003)** of Computer Science and Engineering (CSE) Society at SUST, Bangladesh.

Honors and Awards

Name of the Honor/ Scholarship/ Award	Level	Type	Location of Tenure	Period
NSERC CGS Award	Federal	Research	University of Windsor	2012/09-2015/08
Ontario Graduate Scholarship (OGS)	Provincial	Research	University of Windsor	2011/09-2012/08
Outstanding Honorary Services Award	Institutional	Leadership	University of Windsor Graduate Student Society (GSS)	31/03/2016
Student Solidarity Award	Institutional	Leadership	Organization of Part-time University Students (OPUS)	24/03/2016
Special Recognition Award	Institutional	Leadership	University of Windsor Students’ Alliance (UWSA)	08/04/2016
Dr. Ross H. Paul Scholarship	Institutional	Research	University of Windsor	2010/09-2011/08
Tuition Waiver & Doctoral Entrance Scholarship	Institutional	Academic	University of Windsor	2011/09-2015/08
Best Emerging Youth Leader	International	Leadership	US Consulate, Karachi	2006

Chancellor's Gold Medal	Institutional	Academic	Shahjalal University of Science & Tech. (SUST)	2004
Prime-Minister's Gold Medal Award	National	Research	University Grants Commission (UGC), Bangladesh	2003
ASI Scholarship	International	Leadership	Washington College, MD, USA	2004/06-2004/07
NUS Research Scholarship	Institutional	Research	National University of Singapore	Declined, 2007
Erasmus Mundus Scholarship	Institutional	Academic	European Union (Germany, Paris)	Declined, 2007
Erasmus Mundus Scholarship (NEBCC)	Institutional	Academic	European Union (UK, Spain, Greece, Ireland)	Declined, 2007