

## Dr. S.M. Riazul Islam

Telecommunication Engineering Lab, Building # 6, Room # 142, Inha University  
253, Yong-hyun Dong, Nam-Gu, Incheon, 402-751, South Korea

Date of Birth: 04 Jul. 1978

Mob No. (+82)-10-2282-0252

**E-mail:** riazulislam@ieee.org

**Web:** www.riazulislam.com

S.M. Riazul Islam's CV



Ph.D.

(Wireless Communications)

### ACADEMIC AND RESEARCH FIELDS

Wireless Communications: Signal Processing, Detection & Estimation Theory; Communication Theory; Synchronization and Channel Estimation; Advanced Digital Communications; OFDM; MIMO; UWB; WPAN; WBAN; WSN; Cooperative Communications; Interference Analysis & Mitigation.

### EDUCATION

Degree	Institute	Details	Academic Result
<b>Ph.D.</b> (2012.02) MS-Ph.D. Integrated	Graduate School of IT and Telecommunications, Inha University, South Korea.	<b>Major:</b> Information and Communication Engineering. <b>Ph.D. Dissertation Title:</b> Synchronization and channel estimation technologies for high rate UWB systems. <b>Courses:</b> please see the footnotes <sup>1</sup> <b>Supervisor:</b> Prof. Kyung-Sup Kwak	CGPA: 4.20/4.50
<b>M.S.</b> (2005.07)	University of Dhaka (DU), Bangladesh.	<b>Subject:</b> Applied Physics, Electronics & Communication Engineering (APECE). <b>Thesis:</b> FPGA realization of high speed communication chip.	First Class (3 <sup>rd</sup> position)
<b>B.S.</b> (2003.09) 4 Years Integrated	University of Dhaka (DU), Bangladesh.	<b>Subject:</b> Applied Physics, Electronics & Communication Engineering (APECE). <b>Thesis:</b> MAC protocol for wireless ATM (WATM)	First Class (1 <sup>st</sup> position)

### TEACHING & RESEARCH EXPERIENCES

- **Lecturer (2005.09-present):** Dept. of Applied Physics, Electronics & Communication Engineering (APECE), University of Dhaka (DU), Bangladesh.
- **Research Associate (2008.03-2012.02):** INHA UWB-ITRC Center, Inha University, South Korea.

<sup>1</sup> Advanced digital communications, Mobile communications, OFDM systems, MIMO technology, Advanced probability, Stochastic Process, Satellite communications, Information and coding theory, Radio resource management & Game theory, Broadband wireless access, Wireless sensor network, Cognitive radio: Spectrum sensing & Power allocation, Statistical signal processing: Detection, & Estimation.

- **Faculty Member (2005.03- 2005.09):** Stamford University Bangladesh, Dhaka, Bangladesh.
- **Lecturer part time (Fall 2007):** U. of Information Technology & Sciences (UITS), Dhaka, Bangladesh.
- **Lecturer part time (Fall 2007):** Dhaka International University, Dhaka, Bangladesh.
- **Lecturer part time (Spring 2007):** Daffodil International University (DIU), Dhaka, Bangladesh.
- **Lecturer part time (Spring & Fall 2006, Spring 2007):** Stamford University, Dhaka, Bangladesh.
- **Lecturer part time (2003.11-2004.08):** Institute of Science & Technology (IST), Dhaka, Bangladesh.

## COURSES TAUGHT

---

- **Courses:** Digital modulation techniques, Electrical technology & measurements, Microprocessor & Assembly language programming, Power electronics, Analog electronics, Electronic material & devices, Fundamentals of physics.
- **Lab works:** Computer programming in C, Analog and digital electronic circuit design & implementation, Communication system simulations.
- **Supervision:** BS project, MS thesis of number students in APECE, U. of Dhaka. BS project of several foreign students majoring in Information & Communication Engineering, Inha University.

## JOURNAL PUBLICATIONS

---

- 1- MA Ameen, N Ullah, MS Chowdhury, **SMR Islam**, and KS Kwak, "A Power Efficient MAC Protocol for Wireless Body Area Networks," EURASIP Journal on Wireless Communications and Networking 2012, 2012: 33 doi:10.1186/1687-1499-2012-33. (SCI)
- 2- **SMR Islam**, MA Ameen, and KS Kwak, "Channel estimation in ECMA-368-based UWB systems with unknown interferences," Telecommunication Systems, Published online 03 Sep. 2011, Doi: 10.1007/s11235-011-9631-0. (SCI).
- 3- **SMR Islam**, and KS Kwak, "Preamble-based improved channel estimation for multiband UWB systems in presence of interferences," Telecommunication Systems, Published online 09 Apr. 2011, Doi: 10.1007/s11235-011-9440-5. (SCI).
- 4- **SMR Islam**, and KS Kwak, "Zero padded suffix aided subspace-based narrowband interference detected adaptive channel estimation for MB-OFDM UWB systems," Int. J. of the Physical Science, vol. 6, no. 1, pp. 52-64, 04 Jan. 2011. (SCI)
- 5- **SMR Islam**, and KS Kwak, "Energy-efficient channel estimation for multiband UWB systems in presence of interferences," Int. J. of the Physical Sciences, vol. 5, no. 15, pp. 2335-2345, 18 Nov. 2010. (SCI)
- 6- **SMR Islam**, and KS Kwak, "A comprehensive study of channel estimation for WBAN-based healthcare systems: Feasibility of using multiband UWB," J. of Medical Systems (JOMS), Published online 03 Nov. 2010, Doi: 1007/s10916-010-9617-6. (SCI)
- 7- MA Ameen, **SMR Islam**, and KS Kwak, "Energy saving mechanisms for MAC protocols in wireless sensor networks," Int. J. of Distributed Sensor Networks, vol. 2010, Article ID 163413, 2010, doi:10.1155/2010/163413. (SCI)

- 8- **SMR Islam**, and K.S. Kwak, "On channel estimation in MB-OFDM UWB systems with time varying dispersive fading channel," *Int. J. of Digital Content Technology and Its Applications (JDCTA)*, vol. 4, no. 2, pp. 18-24, 2010.
- 9- **SMR Islam**, S Ullah, MH Kabir, MA Ameen, and KS Kwak, "A TR-UWB downconversion autocorrelation receiver for wireless body area network", *EURASIP J. on Wireless Communications and Networking*, Vol. 2009(2009), Article ID 516837, Doi: 10.1155/2009/516837. (SCI)
- 10- S Ullah, H Higgins, **SMR Islam**, P Khan, and KS Kwak, "On PHY and MAC performance in body sensor networks," *EURASIP J. on Wireless Communications and Networking*, vol. 2009(2009), Article ID 479512, Doi: 10.1155/2009/479512. (SCI)
- 11- S Ullah, **SMR Islam**, A Nessa, Y Zhong, and KS Kwak, "Performance analysis of preamble-based TDMA protocol for wireless body area network," *Int. J. of Communication Software and Systems*, vol. 4, no. 3, 2008.
- 12- **SMR Islam**, MA Hai, MS Rahman, and A Aziz, "Adaptive parallel multiple sub-stream CDMA, A preferred MAC protocol for wireless ATM," *Dhaka University J. of Science*, vol. 54, no. 2, 2006.

#### CONFERENCE PUBLICATIONS

---

- 1- A. Iqbal, **SMR Islam**, and KS Kwak, "A study of the performance of UWB-MIMO detection techniques," *Int. Conf. on Ubiquitous and Future Networks (ICUFN)*, China, 2011.
- 2- **SMR Islam**, and KS Kwak, "Energy-efficient channel estimation for MB-OFDM UWB systems in presence of interferences," *Int. Conf. on ICT Convergence (ICTC)*, Jeju, Korea, 2010.
- 3- A. Iqbal, **SMR Islam**, and KS Kwak, "Minimum mean square error-ordered successive interference cancellation (MMSE-OSIC) in UWB MIMO systems," *Int. Conf. on ICT Convergence (ICTC)*, Jeju, Korea, 2010.
- 4- **SMR Islam**, A Iqbal, and KS Kwak, "Joint channel estimation and interference suppressions," *Int. Conf. on Wireless Communications, Networking and Mobile Computing (WiCom)*, China, 2010.
- 5- **SMR Islam**, and KS Kwak, "Winner-Hopf interpolation aided Kalman filter-based channel estimation for MB-OFDM UWB systems with time varying dispersive fading channel," *Int. Conf. on Advanced Communication Technology (ICACT)*, Phoenix Park, Korea, 2010.
- 6- S Ullah, Y Zhong, **SMR Islam**, A Nessa, and KS Kwak, "Throughput limits of IEEE 802.11 and IEEE 802.15.3," *Int. Conf. on Wireless Communications, Networking and Mobile Computing (WiCom)*, China, 2008.
- 7- **SMR Islam**, MH Kabir, S Ullah, and KS Kwak, "Analysis of Bit Error Rate of Rake Receiver in CDMA Systems," *Korea Institute of Communication Society (KICS)*, Jeju Island, Korea, 2008.
- 8- MH Kabir, **SMR Islam**, A Nessa, and KS Kwak, "Doppler Shift Minimization Using Transmit Diversity Technique," *Korea Institute of Communication Society (KICS)*, Jeju Island, Korea, 2008.
- 9- S Ullah, **SMR Islam**, P Khan, and KS Kwak, "Throughput Evaluation of IEEE 802.15.3 and IEEE 802.15.4 for Body Sensor Network," *Korea Institute of Communication Society (KICS)*, Jeju Island, Korea, 2008.

- 10- Z Chengshi, Z. Mingrui, S. Bin, **SMR Islam**, and KS Kwak, "Capacity maximized power allocation for secondary users in OFDM-based cognitive networks," Int. Symposium on Communication and Information Technologies (ISCIT), Laos, 2008.

## MANAGERIAL EXPERIENCES

---

- **Seminar-in-charge (2009):** System Group, Telecommunication Engineering Lab, Inha University, South Korea.
- **President (2009):** BDInhaian, platform for Bangladeshi students studying in Inha University, South Korea.
- **Sports manager (2007):** APECE, U. of Dhaka, Bangladesh.
- **Seminar in charge (2006):** APECE, U. of Dhaka, Bangladesh.
- **Vice-president (2003):** Food managing committee, Shahidullah hall (DU dorm), U. of Dhaka, Bangladesh.
- **School captain (1993):** Jayrampur secondary school, Chuadanga, Bangladesh.

## PROFESSIONAL ACTIVITIES

---

- **Member:** Institute of electrical and electronics engineers (IEEE).
- **Member:** IEEE communication society (IEEE Comsoc).
- **Member:** Editorial Board, Journal of wireless networking and communications, Scientific & Academic Publishing (SAPUB) Co.; Technical committee, SI-invasive and Non-invasive body sensor networks, Journal of digital content technology and its applications (JDCTA).
- **Member:** Int. program committee (IPC), NCM-, ICIS-, and NISS-2009 conferences of AICIT; Int. Conf. on informatics, electronics & vision (ICIEV) 2012.
- **Member:** International association of engineers (IAENG).
- **Journal Reviewer:** Int. J. of communication systems (IJCS), J. of engineering & technology research (JETR), Int. J. of computer science issues (IJCSI), IEEE communications letters, Int. J. of the physical sciences (IJPS), Recent patents on electrical engineering.
- **Conference Reviewer:** ICC-2012, GLOBECOM-2011, PIMRC-2010, WiCom-2010, ICACT-2011.

## AWARDS AND/OR SCHOLARSHIPS

---

- **Dean's Award (2012):** For the best student in academic and research excellence in Ph.D.
- **Honor of Academic Excellence (2012):** For successful completion of Ph.D. degree given by Prof. Kyung-Sup Kwak, Director of UWB Wireless Communications Research Center & TelLab, Inha University, Korea.
- **Congratulation Letter (2012):** For achieving Ph.D. degree given by BDInhaian, platform for Bangladeshi students studying in Inha University, South Korea.
- **Korean Government Scholarship (2008.03-2012.02):** Institute of information technology advancement (IITA) scholarship for Ph.D. program (living expense).

- **Jungseok International Scholarship (2008.03-2012.02):** Inha University scholarship for PhD program (full tuition and other fees).
- **Dhaka University Gold Medal (2003):** University award for First Class First position given by the then prime minister of Bangladesh.
- **Honor of Academic Excellence (2003):** Outstanding academic performance evaluated by APECE Alumni.
- **Dhaka University Scholarship:** University BS Merit Scholarship.
- **Education Board Scholarship (1997-2000):** Jessore education board scholarship as yearly financial reward.
- **Congratulation Letter (1996):** For holding the position in the nation-wide combined merit list of higher secondary certificate (HSC) given by the then prime minister of Bangladesh.
- **Education Board Scholarship (1995-1996):** Jessore education board scholarship as yearly financial reward.
- **Best Student Award (1994):** Jayrampur secondary school best student award.
- **Secondary School Scholarship (1989-1993):** Full free studentship at Jayrampur secondary school.

## COMPUTER SKILLS

---

- **Professional Software:** MATLAB (signal processing and communications), NS-2, C, Visual Basic, Oracle (SQL/PL-SQL), Assembly language.
- **Applications & Internet:** MS Office (word, excel, power point), E-mail, Internet browsing & searching, Social network service (SNS), Blogging, Website development (WYSWYG, html, web hosting & domain management), Online shopping, Various utility software installations, uses & maintenance, AV software, Windows OS, and Computer system installation & maintenance.
- **Hardware:** Computer and peripherals assembly and maintenance, Windows OS-based networking and router installation.

## REFEREE

---

- Dr. Kyung-Sup Kwak, Professor & Director, INHA UWB-ITRC: UWB wireless communication research center, Inha University, Incheon, South Korea. E-mail: kskwak@inha.ac.kr.
- Dr. Sana Ullah, Chair of Pervasive and Mobile Computing, King Saud University, Riyadh, Saudi Arabia. E-mail: sanajcs@hotmail.com.
- Dr. Md. Mahbubul Alam Joarder, Associate Professor & Director, Institute of Information Technology (IIT), University of Dhaka, Dhaka, Bangladesh. E-mail: joarder@univdhaka.edu.