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**Career
Interests
and Summary**

I pursue an academic career of teaching and research in the field Computer Science and Human Computer Interaction in particular. My research interest is focused on virtual, augmented or mixed reality applications and social computing. In terms of teaching, I am broadly interested in human computer interactions, programming languages, database, web platforms, and other subjects related to computer science.

I have about **5 years** of research and teaching experience in Australia and Bangladesh. I have published in top conference and journal venues. My publications have received significant interest in the research community (243 citations, as of April 2019 in Google Scholar with h-index: 9, and i-10 index: 7).

**Work
Experience
(Full-Time)**

Research Fellow (1.0 FTE), School of Computing and Information Systems (CIS),
The University of Melbourne, Australia (Jun. 2017 – Jun. 2018)
Research Fellow (0.8 FTE) & Associate Lecturer (0.2 FTE), School of CIS,
The University of Melbourne, Australia (Jul. 2018 – Present)

- I am leading the “Augmented Studio” and “Virtual Co-Presence” projects and collaborating in few others. These research projects are related to virtual, augmented, and mixed reality systems for different social, health, public space, and educational contexts.

Assistant Professor, Dept. of CSE, BUET, Bangladesh (Mar.’13 – Aug.’13)
Lecturer, Dept. of CSE, BUET, Bangladesh (Aug.’08 – Mar.’09, Mar.’11 – Mar.’13)
Lecturer, Dept. of CSE, BRACU, Bangladesh (Jan.’08 – Jul.’08, Jan.’11 – Mar.’11)

- In these positions, I was involved in teaching different theory and lab courses for undergraduate students (listed in page 2)

Grants

- **Principal Investigator** of the project “*A Research Study on Determining the Effect of 3G Mobile Network on the Implementation of e-Governance in Bangladesh*”. Grant received from the Ministry of Science and Technology, Govt. of Bangladesh. **AU \$23K Approx.**
- **Associate Sub-Project Manager** of the project “*Development of Mobile Computing Lab for Teaching, Learning, and Research*”. Grant (AU \$280K) from the World Bank’s Academic Innovation Fund (AIF) with Prof. Sohel Rahman and Prof. Mostafa Akbar. **AU \$280K Approx.**

**Research
Experience**

– Member of the Microsoft Research Centre for Social NUI and Interaction Design Lab at the School of Computing and Information Systems, the University of Melbourne, Australia. I have been involved in projects about natural user interfaces, augmented & virtual reality, health, education, public space, etc. (Aug. 2013 – Present)

– Visiting research student, Human Experience and Design Group, Microsoft Research, Cambridge, UK. I have collaborated and co-authored with Dr. Kenton O’Hara from

this lab since 2013. In 2016, I visited the lab to present my work there and have further discussion with the esteemed researchers at MSR. (Apr. 2016)

– Study Away at the Open Lab, Newcastle University, UK. I have collaborated with Dr. Rob Comber and Dr. Jeremy Farr-Wharton in designing a technology probe related to my PhD research. I have also presented my work there as a part of their Distinguished Lecture Series. (Jan. 2016 – Apr. 2016)

– I led the Human Computer Interaction research group in BUET, Bangladesh and the OpenStreetMap community in Bangladesh. (Mar. 2011 – Jul. 2013)

– Member of the Video Processing and Communications Research Group at GSIT, Monash University, Australia. (Mar. 2009 – Mar. 2011)

Teaching Experience

- **The University of Melbourne, Australia**

- BUSA90500 - Introduction to Business Problems - Programming in R and Python (Semester 1, 2019)

- INFO90005 - Information Architecture (Scheduled for Semester 2, 2019)

- **Bangladesh University of Engineering and Technology, Bangladesh**

- CSE 307: Information System Design Theory (Fall 2011)

- CSE 109: Programming Language (C/C++) Theory (Spring 2013, Fall 2012)

- CSE 402: Artificial Intelligence Lab (Spring 2011)

- CSE 406: Interfacing Lab (Fall 2008)

- CSE 320: Computer Networks Lab (Spring 2011)

- CSE 310: Digital Electronics and Pulse Technique Lab (Fall 2012)

- CSE 308: Information System Design Lab (Fall 2011)

- CSE 306: Database Lab (Fall 2008)

- CSE 300: Technical Writing and Presentation Lab (Fall 2011)

- CSE 208: Assembly Language Lab (Spring 2011)

- CSE 110: Programming Language Lab (Spring 2013, Fall 2012, Spring 2011)

- CSE 106: Structured Programming Language Lab (Spring 2011, Fall 2008)

- CSE 100: Introduction to Computers Lab (Fall 2012, Spring 2011)

- **BRAC University, Bangladesh**

- CSE 341: Microprocessor Theory (Sum.-Spring '12, Summer-Fall-Spring '11)

- CSE 341: Microprocessor Lab (Spring 2011)

- CSE 330: Numerical Methods Theory (Summer 2012, Spring 2012)

- CSE 330: Numerical Methods Lab (Spring 2011)

- CSE 109: Structured Programming Lab (Spring 2011, Spring 2008,)

- CSE 101: Introduction to Computers Theory (Spring 2008, Summer 2008)

- CSE 101: Introduction to Computers Lab (Spring 2008, Summer 2008)

Guest Lectures

- **Augmented Reality Applications: HCI beyond Fieldwork for Design** for the course Fieldwork for Design at the University of Melbourne 2018

- **Video Analysis for Fieldwork: Lessons from TableTalk** for the course Usability Evaluation Methods at the University of Melbourne 2018

Student Supervision

- **Master of IT thesis** for Coursework Students: I have completed supervision of one student at the University of Melbourne. 2017

- **Undergraduate Thesis Supervision:** I have supervised 14 students at Bangladesh University of Engineering and Technology and BRAC University. 2011 - 2013

Education

Doctor of Philosophy, School of Computing and Information Systems, The University of Melbourne, Australia (Aug. 2013 – Mar. 2018)

- My PhD research is in the field of Human Computer Interaction (HCI) under the supervision of Professor Frank Vetere and Dr. Hilary Davis.
- In my thesis **Technology at Family Mealtimes**, I have investigated the everyday interactions of familial uses of technology around mealtimes. I have developed a novel system named *TableTalk* that transforms personal smart devices into shared resource and have demonstrated how technology that is sensitive to the needs of family interactions can enhance togetherness.
- My expertise includes social computing, qualitative research design, data collection and analysis about collaborative use of technology, natural user interfaces, user-centric design, smartphone app development, statistical analysis, etc.

Master of Information Technology (Research), Faculty of Information Technology, Monash University, Australia (Mar. 2009 – Apr. 2010)

- Supervisor: Professor Manzur Murshed. Result: **H1 (1st Class Honours)**.
- In my thesis titled **Enhanced IEEE 802.11 by Integrating Multiuser Dynamic OFDMA**, I demonstrated that the collision avoidance protocol in WiFi network is inefficient and redesigned it to provide higher throughput. I proved the validity of the proposal through theoretical analysis and simulation.

Bachelor of Science (Honours) in Computer Science & Engineering, Bangladesh University of Engineering & Technology (BUET), Bangladesh (Feb. 2003 – Jan. 2008)

- Result: CGPA **3.86** on a scale of 4.0 (**7th** among 115 graduating students).

Notable Publications

1. **Ferdous, H. S.**, Hoang, T., Joukhadar, Z., Reinoso, M.N., Vetere, F., Kelly, D., Remedios, L. “What’s Happening at that Hip?”: Evaluating an On-body Projection based Augmented Reality System for Physiotherapy Classroom. Accepted as full paper in CHI’19 Conference. **Ranked A***
2. Kelly, R., **Ferdous, H. S.**, Wouters, N., Vetere, F. Can Augmented Reality Stimulate a Honeypot Effect? Observations from Santa’s Lil Helper. Accepted as full paper in CHI’19 Conference. [**Honourable Mention**] **Ranked A***
3. **Ferdous, H. S.**, Vetere, F., Davis, H., Ploderer, B., Comber, R., O’Hara, K., Farr-Wharton, G. Celebratory Technology to Orchestrate the Sharing of Devices and Stories during Family Mealtimes, in Proc. CHI’17. **Ranked A***
4. **Ferdous, H. S.**, Ploderer, B., Davis, H., Vetere, F., O’Hara, K. Commensality and the Social Use of Technology during Family Mealtime. ACM Transactions on Computer-Human Interaction (TOCHI), 23(6), 2016. **Ranked A***
5. **Ferdous, H. S.**, Ploderer, B., Davis, H., Vetere, F., O’Hara, K., Farr-Wharton, G., Comber, R. TableTalk: Integrating Personal Devices and Content for Commensal Experiences at the Family Dinner Table, in Proc. UbiComp’16. **Ranked A***
6. **Ferdous, H. S.**, Tasnim, M., Ahmed, S., Anik, T. Social Media Question Asking: A Developing Country Perspective. Book chapter in Recommendation and Search in Social Networks, Springer Publications, 2015.
7. Ahmed, S. I., Jackson S., Ahmed N., **Ferdous, H. S.**, Rifat, M. R., Rizvi, A. S., Ahmed, S., Mansur, R. S. Protibadi: A Platform for Fighting Sexual Harassment in Urban Bangladesh, in Proc. CHI’14. **Ranked A***

**Other
Publications**

1. Wouters, N., Kelly, R., Velloso, E., Wolf, K., **Ferdous, H.S.**, Newn, J., Joukhadar, Z., Vetere, F. Biometric Mirror: Exploring Ethical Opinions towards Facial Analysis and Automated Decision-Making. Accepted as a full paper in DIS'19 Conference. **Ranked B**
2. **Ferdous, H. S.**, Das, D., Choudhury, F. M. Social Media Question Asking (SMQA): Whom Do We Tag and Why? In Proc. OzCHI'18. **Ranked B**
3. Hoang, T. N., **Ferdous, H. S.**, Vetere, F., Reinoso, M. Body as a Canvas: An Exploration on the Role of the Body as Display of Digital Information. In Proc. DIS '18. **Ranked B**
4. Davis, H., **Ferdous, H.S.**, Vetere, F. Table Manners: Children's Use of Mobile Technologies in Family-friendly Restaurants, in Proc. CHI Extended Abstract'17 **Ranked A***
5. **Ferdous, H. S.** Technology at Mealtime: Beyond the 'Ordinary', in Proc. CHI Extended Abstract'15. **Ranked A***
6. **Ferdous, H. S.**, Ploderer, B., Davis, H., Vetere, F., O'Hara, K. Pairing Technology and Meals: A Contextual Enquiry in the Household, in Proc. OzCHI'15. **Ranked B**
7. Islam, M. R., Rahaman, S., Hasan, R., Noel, R. R., Salekin, A., **Ferdous, H. S.** A Novel Approach for Constructing Emulator for Microsoft Kinect XBOX 360 Sensor in the. NET Platform. In Proc. ISMS'13.
8. Ahmed, S., Anik, M. T. A., Tasnim, M., **Ferdous, H. S.** Statistical Analysis and Implications of SNS search in Under-Developed Countries, in Proc. OzCHI'13. **Ranked B**
9. Monir, S., Rubya, S., and **Ferdous, H. S.** Rotation and Scale Invariant Posture Recognition using MS Kinect Skeletal Tracking Feature, in Proc. ISDA'12.
10. Rubya, S., Monir, S., **Ferdous, H. S.** Genetic Approach for a Flexible Cell Phone Keypad with Reduced Keystrokes and Key Jamming for Better Human Technology Interaction, Journal of Multimedia, Academy Publishers., 7(5), 2012.
11. Kabir, A., Alam, M., Ahmed, L., Sabah, S., **Ferdous, H. S.** Performance Comparison of Medium Access Control Schemes for IEEE 802.11, in Proc. APCC '12. **Ranked B**
12. Hassan, A. Z., Zahed, B. T., Zohora, F. T., Moosa, J. M., Salam, T., Rahman, M. M., **Ferdous, H. S.**, Ahmed, S. I. Developing the Concept of Money by Interactive Computer Games for Autistic Children, in Proc. ISM'11.
13. Rifat, M. R., Moutushy, S., Ahmed, S. I., **Ferdous, H. S.** Location based Information system using OpenStreetMap, in Proc. SCORED'11.
14. **Ferdous, H. S.**, Murshed, M. Analytical Modelling of Multiuser Dynamic OFDMA based IEEE 802.11 under Saturation Load, in Proc. APCC '11. **Ranked B**
15. **Ferdous, H. S.**, Murshed, M. Ad Hoc Operation of Enhanced IEEE 802.11 with Multiuser Dynamic OFDMA under Saturation Load, in Proc. WCNC '11. **Ranked B**
16. **Ferdous, H. S.**, Murshed, M. 2010. Enhanced IEEE 802.11 by Integrating Multiuser Dynamic OFDMA, in Proc. WTS '10.

Under Review and Ongoing Works

1. Hoang, T. N., **Ferdous, H.S.**, Vetere, F. Data Wearing: A Novel Design Perspective for Wearable Computing, submitted and under review in IJHCS Journal. **Ranked A**
2. **Ferdous, H.S.**, Vetere, F., Ploderer, B., Davis, H., O'Hara, K. Forget the Salt, Pass the iPad: Technologies at Family Mealtimes. To be submitted in HCI Journal by April 30 2019. **Ranked A**
3. **Ferdous, H.S.**, Raj, P. Ahmed, S. I. HelloTask: Understanding the sharing economy in developing regions. Submitted in CSCW 2019. **Ranked A**

Notable Awards and Fellowships

Honourable Mention Award for paper "Santa's Lil Helper" at CHI 2019	2019
Best Paper Award, CIS Doctoral Colloquium, The University of Melbourne	2017
Best Paper Award, CIS Doctoral Colloquium, The University of Melbourne	2016
Google PhD Travel Scholarship	2016
Melbourne Abroad Travel Scholarship, The University of Melbourne	2016
Microsoft Social NUI Top Up Scholarship for PhD research	2015–2017
Fully Funded Scholarship for PhD Research (MIRS & MFRS)	2013–2017
Best Research Poster Award, WECS, Bangladesh	2013
Mentor of team BUET 101, National Champion of Microsoft Imagine Cup	2013
Mentor of team BUET Skull, Runners up in IRC, Techfest, IIT, India	2013
Runner Up in the Three Minute Thesis, Faculty of IT, Monash University	2010
Fully Funded Scholarship for Master of IT (Research) (MGS & GFRS)	2009–2011
Dean's Award and Merit Scholarship, BUET, in each year of study	2003–2007

Other Work Experiences

Lab Manager, casual position in the Interaction Design Lab, School of Computing and Information Systems, the University of Melbourne (Apr. 2014 – May 2017)

- My duties and responsibilities included assisting other researchers, students, and commercial bodies to set up user-studies, and run workshops for students demonstrating the use of different lab equipment, for example, eye tracking devices, Kinect sensor, video and audio recording instruments, etc.

Substitute Demonstrator, INFO90002: Database Sys. & Info. Model. (Apr. 2017)

Marker, ISYS90085: Interaction Design and Usability (Nov. 2016)

Tutor, COMP90043: Cryptography and Security (Jul. 2014 – Nov. 2014)

- Assisted masters and undergraduate students at the University of Melbourne to solve different problems and research presentations relevant to the course.

Professional Contributions

- **Associate Chair**: CHI 2018 LBW
- **Organising Committee**: OzCHI (2015, 2016), WHAT 2013, WALCOM 2011
- **Program Committee**: COMPSAC (2017, 2018)
- **Paper Reviewing**: CHI (2015 - 2019), MobileHCI (2018), IEEE VR (2018, 2019), IMWUT (2017 - 2019), APPETITE (2017), OzCHI (2014 - 2018), ICCIT(2009 - 2011)
- **Student Volunteer**: OzCHI (2015, 2016), SIGCHI ESV (2017, 2018)

References

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