

# Curriculum Vitae of Md Iqbal Hossain

Postdoctoral Research Associate

Department of Computer Science

University of Arizona

Tucson, Arizona

Email: [hossain@email.arizona.edu](mailto:hossain@email.arizona.edu)

<https://cs.arizona.edu/~hossain>

<https://www.linkedin.com/pub/iqbal-hossain/9/864/957>

Last compiled on January 27, 2017 using L<sup>A</sup>T<sub>E</sub>X

## 1 Research Area

- Natural Language Processing (NLP), Information Visualization
- Graph Theory and Graph Drawing
- Algorithms and Data structure, Combinatorial Optimization

## 2 Research Experiences

1. **Duration:** 2016 to till now  
**Supervisor:** Prof. Stephen Kobourov  
Professor, Department of Computer Science,  
University of Arizona  
**Research Area:** Information Visualization, Knowledge Map Representation  
**Project:** UAMAP: Knowledge Map of University of Arizona.
2. **Duration:** 2011 to 2016 (5 years)  
**Supervisor:** Dr. Md. Saidur Rahman  
Professor,  
Graph Drawing and Information Visualization Laboratory  
Department of Computer Science and Engineering,  
Bangladesh University of Engineering and Technology  
  
**Research Area:** Algorithms, Graph Theory, Graph Drawing, Planar graph
3. **Duration:** Oct to Dec 2014 (3 Months)  
**Supervisor:** Prof. Dr. Giuseppe Liotta  
Algorithm Engineering and Information Visualization Lab  
University of Perugia, Italy  
Supported by “Algorithmics for MAssive and Networked DATA”  
**Research Area:** Non-planar Graph, Complex Network, Circular Embedding, Linear Embedding <http://www.dia.uniroma3.it/~amanda/>

### 3 Education

- **Ph. D,**  
Department of Computer Science and Engineering, Bangladesh University of Engineering and Technology (BUET)  
Year: Nov 2015  
CGPA: 3.83  
Thesis: Straight-line Drawings of Planar Graphs with Constraints
- **Master of Engineering in Computer Science and Engineering,**  
Department of Computer Science and Engineering, Bangladesh University of Engineering and Technology (BUET),  
Year: 2010  
Thesis: SQL Query Based Data and Structure Uniformity Maintenance in Heterogeneous Database Environment
- **Bachelor of Science in Computer Science and Engineering,**  
Department of Computer Science and Engineering,  
Rajshahi University of Engineering and Technology(RUET),  
Year: 2005

### 4 Work Experiences

- **Postdoctoral Research Associate (Jun 2016 to till now)**  
Department of Computer Science, The University of Arizona, USA.
  - Information Visualization, Knowledge Map Representation
- **System Analyst (Dec 2013 to Jun 2016)- 2.5 years**  
Dept. of Computer Science and Engineering, BUET
  - Analysis, design and coding for new webbased software applications
  - Administration and configuration of TCP/IP Networks, IP address assign and distribution
  - Management of web accounts for faculty members and students
  - Administration of central authentication server (Radius)
  - Customization and course management of in e-learning moodle
  - Management of student account in Google educational services
  - Management of technical personnels.

### 5 Technical Skill

- Technical Writing: Yed, Latex, Latexdraw, xfig, latex-beamer.

- Programming Language & Tools: C/C++, Java, SQL, python
- Web Programming: HTML, CSS, JavaScript, AJAX, PHP, JQuery etc.
- Operating System Skill: Linux
- Hands-on experiences on BIG data technologies and data analytics tools: neo4j, R, Rstudio, hadoop, octave, machine learning, mongodb.

## 6 Grant Awards

- CodeCrafters-Investortools Research Grant, 2013
- Three months research supported by “Algorithmics for MAssive and Net-worked DATA” @ University of Perugia, Italy, 2014

## 7 Other Activities

- Paper Reviewed:
  - Algorithmica, isaac, IWOCOA, COCOON, jgaa, PLOSone, TCS, WALCOM, Journal of Discrete Algorithms, socg
- Organizing Committee member for:
  - EAI International Conference on IoT and Big Data Technologies for HealthCare
  - Workshop on Graph Drawing and Graph Algorithms (GDGA 2013)
  - Workshop on Algorithms and Computation (WALCOM 2012)
  - Workshop on Algorithms and Computation (WALCOM 2010)

## 8 Publications

Journal Papers :

1. Carla Binucci, Emilio Di Giacomo, **Md. Iqbal Hossain**, and Giuseppe Liotta. 1-page and 2-page drawings with bounded number of crossings per edge. European Journal of Combinatorics, 2015, Accpeted.
2. **Md. Iqbal Hossain** and Md. Saidur Rahman, Good Spanning Trees in Graph Drawing, Journal of Theoretical Computer Science (**TCS**), Elsevier, Vol 607, Part 2, pp. 149 - 165, 2015.
3. **Md. Iqbal Hossain** and Md. Saidur Rahman, Straight-Line Monotone Grid Drawings of Series-Parallel Graphs, Journal of Discrete Mathematics, Algorithms and Applications (**DMAA**), Vol. 07, no. 2, 2015.

4. **Md. Iqbal Hossain**, Debajyoti Mondal, Md. Saidur Rahman, and Sammi Abida Salma, Universal Line-Sets for Drawing Planar 3-Trees. Journal of Graph Algorithms and Applications (**JGAA**), Vol. 17, no. 2, pp. 59-79, 2013.
5. Sammi Abida Salma, Md. Saidur Rahman, **Md. Iqbal Hossain**, Triangle-Free Outerplanar 3-Graphs are Pairwise Compatibility Graphs. Journal of Graph Algorithms and Applications (**JGAA**), Vol. 17, no. 2, pp. 81-102, 2013.
6. Abu Sayed Md. Latiful Hoque, Mohammad Mahfuzul Islam, **Md. Iqbal Hossain** and Md. Faysal Ahmed, Problem-based e-Learning and Evaluation System for Database Design and Programming in SQL. International Journal of e-Education, e-Business, e-Management and e-Learning (**IJEEEE**), 2012 Vol.2(6): 537-542 ISSN: 2010-3654, Dubai, UAE, 2012.

Conference Papers :

7. **Md. Iqbal Hossain**, Sammi Abida Salma and Md. Saidur Rahman. A Necessary Condition and a Sufficient Condition for Pairwise Compatibility Graphs. In Workshop on Algorithms and Computation (**WALCOM 2016**), Lecture Notes in Computer Science(**LNCS** ), Springer, pp.107-113, 2016.
8. Carla Binucci, Emilio Di Giacomo, **Md. Iqbal Hossain** and Giuseppe Liotta. 1-page and 2-page Drawings with Bounded Number of Crossings per Edge. In 26th International Workshop on Combinatorial Algorithms (**IWOCA 2015**), Lecture Notes in Computer Science(**LNCS**), Springer, 2015.
9. **Md. Iqbal Hossain**, Shaheena Sultana, Nazmun Nessa Moon, Tahsina Hashem and Md. Saidur Rahman, On Triangle Cover Contact Graphs. In Workshop on Algorithms and Computation (**WALCOM 2015**), Lecture Notes in Computer Science(**LNCS**), Springer, pp.323-328, 2015.
10. **Md. Iqbal Hossain** and Md. Saidur Rahman, Monotone Grid Drawings of Planar Graphs. 8th International Frontiers of Algorithmics Workshop (**FAW 2014**), Lecture Notes in Computer Science(**LNCS**), Springer, pp.105-116, 2014.
11. **Md. Iqbal Hossain** , Shaheena Sultana, Aftab Hussain, Nazmun Nessa Moon and Md. Saidur Rahman, L-Shaped Drawings of Series-Parallel Graphs, Proceedings 18 th International Mathematics Conference 2014.
12. Naima Khan, Nazifa Karima, Md. Saidur Rahman and **Md. Iqbal Hossain**, Orthogonal Grid Pointset Embeddings of Maximal Outerplanar Graphs, In Proceedings of International Conference on Electrical Engineering and Information Communication Technology (**ICEEICT 2014**), **IEEE**, 2014.

13. **Md. Iqbal Hossain** and Md. Saidur Rahman, Straight-Line Monotone Grid Drawings of Series-Parallel Graphs. International Computing and Combinatorics Conference (**COCOON 2013**), Lecture Notes in Computer Science(**LNCS**), Springer, pp.672-679, 2013.
14. **Md. Iqbal Hossain**, Debajyoti Mondal, Md. Saidur Rahman, and Sammi Abida Salma, Universal Line-Sets for Drawing Planar 3-Trees. In Workshop on Algorithms and Computation (**WALCOM 2012**), Lecture Notes in Computer Science(**LNCS**), Springer, pp 136-147, Jan. 2012.
15. **Md. Iqbal Hossain** and Muhammad Masroor Ali, SQL Query Based Data Synchronization in Heterogeneous Database Environment. In International Conference on Computer Communication and Informatics (**IC-CCI 2012**), **IEEE**, pp.1-5, 10-12 Jan. 2012.

Poster (2):

16. **Md. Iqbal Hossain** and Shaheena Sultana, Md. Yusuf Sarwar Uddin, Graph Synchrony in Wireless Sensor Networks. Workshop on Wireless Network and Communication (WNC), BUET, Dhaka, 2013.
17. **Md. Iqbal Hossain** and Abu Sayed Md. Latiful Hoque, SQL-LES: a Novel e-Learning and e-Evaluation Tool for Database Education. 19th Conference of the Islamic Word Academy of Sciences, Dhaka, 2013.