

ENAMUL HOQUE PRINCE

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RESEARCH INTERESTS

My research focuses on combining information visualization and human-computer interaction with natural language processing to address the challenges of the information overload problem. In particular, I design and develop both text analysis and interactive visualization techniques to explore a large amount of data.

EDUCATION

- 09/ 2012- 05/2017 **University of British Columbia (UBC)**, Canada
PhD in Computer Science
Advisor: Giuseppe Carenini
Committee: Tamara Munzner, Raymond Ng, Sheelagh Carpendale (external)
Thesis: *Visual text analytics for online conversations*
- 01/ 2010- 01/2012 **Memorial University of Newfoundland (MUN)**, Canada
MSc in Computer Science
Advisors: Orland Hoeber and Minglun Gong
Thesis: *Concept-based query expansion and interactive visualization for Web image search*
- 03/2003- 08/2007 **Chittagong University of Engineering & Technology (CUET)**, Bangladesh
BSc in Computer Science & Engineering

RESEARCH EXPERIENCE

- 07/2017- present **Stanford University**, CA, USA
Postdoctoral scholar
Working with Prof. Maneesh Agrawala in the areas of data visualization, HCI, and natural language processing
- 05/2016- 09/2016 **Tableau Software**, Palo Alto, CA, USA
Research Intern
Developed a natural language interface for interaction with visual analytics systems [J8]
- 01/2016- 05/2016 **Qatar Computing Research Institute (QCRI)**, Qatar
Research Associate
Developed and deployed an intelligent visual interface for supporting the exploration of community question answering forums [C9, D1].
Developed and evaluated a speech act classifier [C7] in collaboration.
- 09/2012- 01/2016 **University of British Columbia**, Canada
Research Assistant

- Developed visual text analytics for online conversations [J6, J7, C5, C6, C9, W4]
- 09/2012- 04/2013, **University of British Columbia**, Canada
 09/2016-06/2017 *Research Assistant*
 Developed InfoVis systems and ran user studies in the Advanced Tools for User-Adaptive Visualization (ATUAV) project [J5, C4, W2, W3]
- 01/2010- 12/2011 **Memorial University of Newfoundland**, Canada
Research Assistant
 Developed tools and techniques for Web image search [J3, J4, C3, W1]

TEACHING EXPERIENCE

- Teaching Assistant, University of British Columbia*
 Marked assignments and exams, answered questions
- Fall 2016, Fall 2015 CPSC 422: Artificial Intelligence 2
 Summer 2015 CPSC 213: Introduction to Computer Systems
- Teaching Assistant, Memorial University of Newfoundland*
 Marked assignments and quizzes, answered questions
- 2010-11(Winter, Fall) CS 1700: Computer Basics
- Lecturer, Chittagong University of Engineering and Technology*
 Designed course outline, delivered lectures, developed assessments
- 2009 Object Oriented Programming
 2008 Computer Basics and Programming
 2008 Algorithm Design
 2008 Computer Graphics
 2008 Fuzzy Logic & Neural Network

REFEREED PUBLICATIONS

- JOURNAL PAPERS [J8] Enamul Hoque, Vidya Setlur, Melanie Tory and Isaac Dykeman, [Applying Pragmatics Principles for Interaction with Visual Analytics](#), *IEEE Transactions on Visualization and Computer Graphics (Proc. IEEE VAST)*, 2017.
- [J7] Enamul Hoque and Giuseppe Carenini, [Interactive topic modeling for exploring asynchronous online conversations: design and evaluation of ConVisIT](#), *ACM Transactions on Interactive Intelligent Systems (THIS)*, Vol. 6, No. 1, pp. 7:1-7:24, 2016.
- [J6] Enamul Hoque and Giuseppe Carenini, [ConVis: A visual text analytic system for exploring blog conversations](#), *Journal of Computer Graphics Forum (Proc. EuroVis)*, Vol. 33, No. 3, pp. 221-230, 2014, (AR: 22.9%).
- [J5] Cristina Conati, Giuseppe Carenini, Enamul Hoque, Ben Steichen, Dereck Toker, [Evaluating the impact of user characteristics and different layouts on an interactive visualization for decision making](#), *Journal of Computer Graphics*

Forum (Proc. EuroVis), Vol. 33, No. 3, pp. 371-380, 2014, (AR: 22.9%).

[J4] **Enamul Hoque**, Orland Hoeber, Minglun Gong, [CIDER: Concept-based image diversification, exploration, and retrieval](#), *Journal of Information Processing & Management (IPM)*, Vol. 49, No 5, pp. 1122-1138, 2013.

[J3] **Enamul Hoque**, Orland Hoeber, Minglun Gong, [Balancing the trade-offs between diversity and precision for Web image search using concept-based query expansion](#), *Journal of Emerging Technologies in Web Intelligence (JETWI)*, Vol: 4, No 1, pp. 26-34, 2012.

[J2] **Enamul Hoque**, Orland Hoeber, Grant Strong, Minglun Gong, [Combining conceptual query expansion and visual search results exploration for Web image retrieval](#), *Journal of Ambient Intelligence and Humanized Computing (JAIHC)*, Vol. 4, No. 3 pp. 389-400, 2011.

[J1] Gahangir Hossain, **Enamul Hoque**, M. I. Monir, M. A. Sharif, [Automatic stemming and its impact in Bangla information retrieval](#), *Computer Science and Engineering Research Journal (CSERJ)*, Vol. 5, pp. 17-23, ISSN: 1990-4010, 2008.

CONFERENCE
PAPERS

[C9] **Enamul Hoque** Shafiq Joty, Lluís Màrquez, and Giuseppe Carenini, [CQAVis: Visual Text Analytics for Community Question Answering](#), In *Proceedings of ACM Intelligent User Interfaces (IUI)*, pp. 161-172, 2017(AR: 23%).

[C8] Shafiq Joty and **Enamul Hoque**, [Speech Act Modeling of Written Asynchronous Conversations with Task-Specific Embeddings and Conditional Structured Models](#), *Proceedings of the 54th Annual Meeting of the Association for Computational Linguistics (ACL)*, pp. 1746–1756, 2016 (AR: 28%).

[C7] **Enamul Hoque** and Giuseppe Carenini, [MultiConVis: A Visual Text Analytics System for Exploring a Collection of Online Conversations](#), pp. 96-107 In *Proceedings of ACM Intelligent User Interfaces (IUI)*, 2016 (AR: 25.9%).

[C6] **E Hoque**, S. Joty, Lluís Màrquez, Alberto Barrón-Cedeño, Giovanni Martino, Alessandro Moschitti, Preslav Nakov, Salvatore Romeo, and Giuseppe Carenini, [An Interactive System for Exploring Community Question Answering Forums](#), *International Conference on Computational Linguistics (COLING)*, 2016.

[C5] **Enamul Hoque** and Giuseppe Carenini, [ConVisIT: Interactive Topic Modeling for Exploring Asynchronous Online Conversations](#), In *Proceedings of ACM Intelligent User Interfaces (IUI)*, pp. 169-180 2015, (AR: 22.9%).

[C4] Giuseppe Carenini, Cristina Conati, **Enamul Hoque**, Ben Steichen, Dereck Toker, James Enns¹, [Highlighting interventions and user differences: informing](#)

¹ Author order is alphabetical except for last author

[adaptive information visualization support](#), In *Proceedings of The ACM Conference on Human Factors in Computing Systems (CHI)*, pp. 1835-1844, 2014 (AR: 23%).

[C3] Enamul Hoque, Grant Strong, Orland Hoeber Minglun Gong, [Conceptual query expansion and visual search results exploration for Web image retrieval](#), In *Proceedings of the Atlantic Web Intelligence Conference (AWIC)*, pp. 73-82, 2011.

[C2] G. Strong, Enamul Hoque, Minglun Gong and Orland Hoeber, [Organizing and browsing image search results based on conceptual and visual similarities](#), In *Proceedings of the International Symposium on Visual Computing*, pp. 481-490, 2010.

[C1] Enamul Hoque, Gahangir Hossain, Ali Akbar Dewan, Pijush Debnath, [An audible Bangla text entry method in mobile phones with intelligent keypad design](#), In *Proceedings of the International Conference on Computer and Information Technology (ICCIT)*, pp.279-284, 2009, (AR: 31%).

WORKSHOP PAPERS

[W5] Enamul Hoque, Giuseppe Carenini, [Multimedia Summary Generation from Online Conversations: Current Approaches and Future Directions \(EMNLP Workshop on New Frontiers in Summarization\)](#), in conjunction with the **EMNLP 2017**, Copenhagen, Denmark, 2017.

[W4] Enamul Hoque, Giuseppe Carenini and Shafiq Joty, [Interactive Exploration of Asynchronous Conversations: Applying a User-centered Approach to Design a Visual Text Analytic System](#). In *Proceedings of the Workshop on Interactive Language Learning, Visualization, and Interfaces (ILLVI 2014)*, in conjunction with the **ACL-2014**, Baltimore, USA.

[W3] Giuseppe Carenini, Cristina Conati, Enamul Hoque, Ben Steichen, [User Task Adaptation in Multimedia Presentations](#). *Proceedings of the Workshop on User-Adaptive Information Visualization (WUAV 2013)*, in conjunction with the 21st conference on User Modeling, Adaptation and Personalization (**UMAP 2013**), Rome, Italy, June 2013.

[W2] Cristina Conati, Enamul Hoque, Dereck Toker, Ben Steichen, [When to Adapt: Detecting User's Confusion During Visualization Processing](#), *Proceedings of the Workshop on User-Adaptive Information Visualization (WUAV 2013)*, in conjunction with the 21st conference on User Modeling, Adaptation and Personalization (**UMAP 2013**), Rome, Italy, June 2013.

[W1] Enamul Hoque, Orland Hoeber, Minglun Gong, [Evaluating the trade-offs between diversity and precision for Web image search using concept-based query expansion](#), *Proceedings of the Workshop on Intelligent Web Interaction*, in conjunction with the IEEE/WIC/ACM **International Conference on Web Intelligence**, pp. 130-133, Lyon, France, 2011.

- POSTERS [P1] Enamul Hoque, Orland Hoeber, Minglun Gong, [Concept-based interactive visualization approach to Web image search](#) (refereed poster), In *Conference Compendium of the IEEE Information Visualization*, Providence, RI, USA, 2011.
- STUDENT [S2] Enamul Hoque, [Visual Text Analytics for Online Conversations: Design, CONSORTIUM Evaluation, and Applications](#), In *Companion Publication of the International Conference on Intelligent User Interfaces (IUI)*, pp. 122-125, 2016.
- [S1] Enamul Hoque, [Visual Text Analytics for Asynchronous Online Conversations](#), In *Companion Publication of the International Conference on Intelligent User Interfaces (IUI)*, pp. 105-108, 2015.

BOOK CHAPTERS

- [B1] G. Murray, Enamul Hoque and Giuseppe Carenini, [Opinion Summarization and Visualization](#), in *Sentiment Analysis in Social Networks*, Eds. Pozzi, Fersini, Messina, Liu. Elsevier, 2016

INVITED TALKS

- MultiConVis: A Visual Text Analytics System for Exploring a Collection of Online Conversations, *UBC Laboratory for Computational Intelligence (LCI) Forum Talk*, Vancouver, BC, January 2017.
- Visual text analytics for online conversations, *Department of Linguistics*, Simon Fraser University, Burnaby, BC, January 2017.
- An overview of text visualization techniques, *UBC School of Library, Archival and Information Studies (iSchool)*, Vancouver, BC, December 2016.
- ConVis: A visual text analytic system for exploring asynchronous online conversations, *The Pacific Northwest Regional NLP Workshop (NW-NLP)*, Microsoft Research, Redmond, April 2014.
- A visual text analytic system for asynchronous conversations, *UBC Laboratory for Computational Intelligence (LCI) Forum Talk*, Vancouver, BC, November 2013.
- Conceptual query expansion and visual search results exploration for Web image retrieval, *Department of Computer Science*, Memorial University of Newfoundland, St. John's, NL, November 2010.

STUDENTS MENTORED

- 2017 Dae Hyun, PhD student, Stanford University
- 2013 Rastko Djeric, Undergraduate directed study project, UBC
- 2013 Kaya Gajos, Undergraduate directed study project, UBC
- 2009 Kazi Shahadat Hossain, Undergraduate thesis, CUET

- 2009 Sumon Deb, Undergraduate thesis, CUET
 2009 Priyanka Guha, Undergraduate thesis, CUET
 2008 Pijush Debnath, Undergraduate thesis [C1], CUET

AWARDS AND HONORS

- 2012-2016 Faculty of science graduate award, University of British Columbia
 2015, 2016 Travel awards, IUI Conference
 2014 Travel awards, ACL Conference
 2012 Dean's doctoral award, Memorial University of Newfoundland (declined)
 2012 Visa differential scholarship, University of Calgary (declined)
 2011 Fellow of the school of graduate studies, Memorial University
 2010-2011 School of graduate studies award, Memorial University of Newfoundland
 2007 University merit Scholarship, Bangladesh
 1995-2000 Primary and high school talent-pool scholarship, Government of Bangladesh

PROFESSIONAL ACTIVITIES

- Program committee IUI (2015-2018), NAACL-HLT 2018
 Referee InfoVis 2017, EuroVis 2017, IUI (2015 – 2018), ACM TIIS 2017, Journal of Computational Intelligence, Workshop on Human and Technology 2014
 Student volunteer IUI 2016, ACL 2014, Canadian AI/GI/CRV 2011
 Representative Graduate Student Admission Committee, University of British Columbia, 2016
 Vice-President Bangladesh Student Association, Memorial University of Newfoundland, 2011
 Volunteer CS open house program, Memorial University of Newfoundland, 2010
 Organizing secretary CUET ICT fête, 2010
 Coach Programming teams in national programming contests [2008-09]

AFFILIATION

- Member ACM, IEEE, ACL

LEGAL STATUS

Permeant resident of Canada

REFERENCES

Giuseppe Carenini

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