

# Dereck Toker

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## RESEARCH INTERESTS

User-Adaptation and Personalization, Eye Tracking, Information Visualization,  
Machine Learning and Statistical Modeling, Games User Research

## EDUCATION

Ph.D. in Computer Science, University of British Columbia	2013 - 2018 (expected)
M.Sc. in Computer Science, University of British Columbia	2010 - 2013
B.A. Double Major in Philosophy & Computer Science, UBC	2007 - 2010

## EMPLOYMENT

Research Assistant & Teaching Assistant, UBC	Sept. 2010 - present
Analytics Researcher, East Side Games Studio, Vancouver, BC	April 2013 - present

## AWARDS

Mitacs-Accelerate Graduate Research Internship Award	2015
GRAND Postgraduate Scholar Program	2014 - 2015
Motion Metrics/ICICS Graduate Scholarship	2014
Springer Best Paper Award - UMAP'14	2014
NSERC Postgraduate Scholarship	2014 - 2016
UBC Four Year Doctoral Fellowship (4YF)	2013 - 2016
Mitacs-Accelerate Graduate Research Internship Award	2013
UBC Outstanding Graduate Teaching Assistant Award	2011
Electronic Arts Bursary in Computer Science for Outstanding Graduate Students specializing in Interactive Media	2011

## PUBLICATIONS

(\* indicates conference was attended and publication presented)

### *Submitted Journal Papers*

1. **Toker D.**, Lallé S., Conati C., Carenini G., (2015). Pupillometry and Head Distance to the Screen to Predict Skill Acquisition during Information Visualization Tasks. *Eurovis*, Computer Graphics Forum, (submitted).

### *Strictly Refereed Conference Papers*

2. \* Birk M., **Toker D.**, Mandryk R., Conati C., (2015). Modeling Motivation in a Social Network Game using Player-Centric Traits and Personality Traits. *Proceedings of UMAP 2015*, the 23rd International Conference on User Modeling, Adaptation, and Personalization, p. 18-30, (AR: 29%).

3. Lallé S., **Toker D.**, Conati C., Carenini G. (2015). Prediction of Users' Learning Curves for Adaptation while Using an Information Visualization. *Proceedings of IUI 2015*, the 22nd International Conference on Intelligent User Interfaces, p. 357-368, (AR: 23%).
4. \* **Toker D.**, Conati C. (2014). Eye tracking to understand user differences in visualization processing with highlighting interventions. *Proceedings of UMAP 2014*, the 22nd International Conference on User Modeling, Adaptation, and Personalization, p. 219-230, (AR: 16%).
5. Steichen B., Wu M., **Toker D.**, Conati C., Carenini G. (2014). Te,Te,Hi,Hi: Eye Gaze Sequence Analysis for Informing User-Adaptive Information Visualizations. *Proceedings of UMAP 2014*, the 22nd International Conference on User Modeling, Adaptation, and Personalization, p. 183-194, (AR: 16%), **Springer Best Paper Award**.
6. \* Carenini G., Conati C., Hoque E., Steichen B., **Toker D.**, and Enns J. (2014). Highlighting Interventions and User Differences: Informing Adaptive Information Visualization Support. *Proceedings of CHI 2014*, ACM SIGCHI Conference on Human Factors in Computing Systems, p. 1835-1844, (AR: 23%).
7. \* **Toker D.**, Steichen B., Gingerich, M., Conati C., and Carenini G. (2014). Towards Facilitating User Skill Acquisition - Identifying Untrained Visualization Users through Eye Tracking. *Proceedings of IUI 2014*, International Conference on Intelligent User Interfaces, p. 105-144, (AR: 24%), **Honourable Mention**.
8. \* **Toker D.**, Conati C., Steichen B. and Carenini G. (2013) Individual User Characteristics and Information Visualization: Connecting the Dots through Eye Tracking. *Proceedings of CHI 2013*, ACM SIGCHI Conference on Human Factors in Computing Systems, p. 295-304, (AR: 20%).
9. Dawson J., Schneider O., Ferstay J., **Toker D.**, Link J., Haddad D., and MacLean K. (2013) It's alive!: exploring the design space of a gesturing phone. *Proceedings of Graphics Interface 2013* (GI '13). Canadian Information Processing Society, p. 205-212. (AR: 38%)
10. \* **Toker D.**, Conati C., Carenini G. and Haraty M. (2012). Towards Adaptive Information Visualization: On the Influence of User Characteristics. *Proceedings of UMAP 2012*, the 20th International Conference on User Modeling, Adaptation, and Personalization. Springer LNCS 7379, p. 274-285, (AR: 29%).

#### *Journal Papers*

11. Conati, C., Carenini, G., Hoque, E., Steichen, B. and **Toker, D.** (2014). Evaluating the impact of user characteristics and different layouts on an interactive visualization for decision making. *Computer Graphics Forum* (EuroVis 2014), p. 371-380.

#### *Workshop, Poster, & Other Papers*

12. Conati C., Carenini G., **Toker D.**, Lallé S. (2015). Towards User-Adaptive Visualization. *Proceedings of the Twenty-Ninth AAAI Conference on Artificial Intelligence - Senior Track*, p. 4100-4106.
13. \* **Toker D.**, Steichen, B., Birk M. (2014). Predicting Player Type in Social Network Games. *Proceedings of UMAP 2014*, the 22nd International Conference on User Modeling, Adaptation, and Personalization.
14. Conati C., Hoque E., **Toker D.**, Steichen B. (2013). When to Adapt: Detecting User's Confusion During Visualization Processing. *Proceedings of the 1st International Workshop on User-Adaptive Information Visualization* (WUAV 2013), in conjunction with the 21st conference on User Modeling, Adaptation and Personalization (UMAP 2013).

**RESEARCH COMMUNITY SERVICE***External Reviewer*

ACM Graphics Interface (GI)	2016
ACM SIGCHI Conference on Intelligent User Interfaces (IUI)	2015
ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)	2015, 2016
ACM SIGCHI Nordic Conference on Human Factors in Computing Systems (NordiCHI)	2014
ACM SIGCHI Conference on Computer-Human Interaction in Play (CHI Play)	2014, 2015

*Student Volunteer*

Administrator of participant recruitment website: <a href="http://www.reservax.com/hciatubc">www.reservax.com/hciatubc</a>	2014-present
GRAND HQP - "Spend a Week at SIGGRAPH" Program: Connecting with young people	2014
ACM SIGCHI Conference on Human Factors in Computing Systems (CHI)	2013
International Conference on User Modeling, Adaptation, and Personalization (UMAP)	2014, 2015

**VOLUNTEER SERVICE**

Volunteer Speaker - Full Indie game developers, Vancouver	July 2015
Volunteer Programmer, CîTR 101.9 UBC Campus Radio Station	July 2012 - present
Volunteer Database Management, Artists' Legal Outreach (ALO)	Nov. 2009 - May 2010

**TEACHING***Teaching Assistant - Department of Computer Science, UBC*

CPSC 317 - <i>Internet Computing</i>	Spring 2011
CPSC 311 - <i>Definition of Programming Languages</i>	Fall 2010