

LEAH ZHANG-KENNEDY

Stratford School of Interaction Design and Business, University of Waterloo
T (613) 808-5993 E lzhangke@uwaterloo.ca W leahzhangkennedy.com

CV HIGHLIGHTS

Education

- **Ph.D. in Computer Science** from Carleton University in 2017
- **M.ASc. in Human-Computer Interaction (HCI)** from Carleton University in 2013
- **B.Des. Honours in Design** from York University and Sheridan College in 2007

Employment

- **Definite Term Lecturer in User Experience Design and Innovation** at the Stratford School of Interaction Design and Business, University of Waterloo since August 2017
- **Adjunct Professor appointment in research** at the Stratford School of Interaction Design and Business, University of Waterloo from January 2020 to December 2021

Awards and Funding

- **Ontario Graduate Scholarship (OGS) winner** in 2015 and 2016, 15,000 per year
- **Received the Cybersecurity and Privacy Institute (CPI) Seed Grant** at the University of Waterloo for \$20,000 in 2020
- *Co-applicant (submitted) for the Office of the Privacy Commissioner of Canada 2020-2021 Contributions Program for Privacy Research and Knowledge Translation, \$50,000*

Publications

- **Ten full-length peer-reviewed publications** (nine accepted, one submitted), including publications in ACM Computing Surveys, International Journal of Human-Computer Interaction (IJHCI), International Journal of Child-Computer Interaction (IJCCI), USENIX Security, Interaction Design and Children (IDC), British HCI, APWG eCrime, and Persuasive Technology (PT)
- **Ten short-length peer-reviewed publications**, including refereed extended abstracts, workshop papers, and refereed posters

Teaching

- **Two years of full-time teaching experience** at the Stratford School for the Global Business and Digital Arts (GBDA) undergraduate program. Courses taught include capstone, user experience design, web design, digital media design, e-portfolio, and global media project

Curriculum vitae starts on the next page

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EDUCATION

2014–2017

Ph.D. in Computer Science

Carleton University, Ottawa, ON.

Thesis: Multimedia Approaches for Improving Children’s Privacy and Security Knowledge and Persuading Behaviour Change

Supervisor: Dr. Sonia Chiasson

Research Summary: The work identified research gaps in privacy education and found existing children’s mental models of online privacy to inform the design and development of two privacy and security multimedia educational tools for children. The work showed that the tools were effective for improving children’s knowledge retention and promoting privacy-aware behaviour.

Research Areas: Human-Computer Interaction, Usable Security and Privacy, Digital Media, Education

2013–2014

Completed Course Credits in Computer Science (Undergraduate Courses in Data Structures, Systems Programming, Web Applications, and Discrete Mathematics)
School of Computer Science, Carleton University, ON.

2011–2013

M.A.Sc. in Human-Computer Interaction (HCI)

School of Information Technology, Carleton University, Ottawa, ON.

Supervisors: Drs. Sonia Chiasson and Robert Biddle

Thesis: : Improving Mental Models of Computer Security Through Information Graphics

Research Summary: The design, prototyping, and empirical studies of computer security educational materials for adults showed that visual communication is a viable and effective approach for conveying security information, and for helping end-users develop functional mental models of computer security.

2003–2007

B.Des. Honours in Design

School of Design, York University and Sheridan College, Toronto and Oakville, ON.

2001–2003

Completed Course Credits in Fine Arts
School of Fine Arts and Music, University of Guelph, ON.

Employment

2017–present

Definite Term Lecturer in User Experience Design and Innovation, Stratford School of Interaction Design and Business, University of Waterloo

Teaching courses in the Global Business and Digital Arts (GBDA) undergraduate program

2020–2021

Adjunct Professor, Stratford School of Interaction Design and Business, University of Waterloo

Leading the research project, “*My Digital Privacy: Improving Consumer Awareness of Information Privacy and Privacy Rights*”

2017

Contract Graphic Designer for SERENE-RISC Smart Cyber-Security Network, Montreal, QC.

Designing print communication for training programs

2012–2017

Research Assistant, School of Computer Science, Carleton University

Designing and conducting experiments, developing prototypes, conducting data analysis, writing, mentoring undergraduate and graduate students, coordinating research tasks

2011–2015

Teaching Assistant, School of Computer Science, and Information Technology, Carleton University

Teaching tutorials, supervising design studio, facilitating undergraduate group projects, grading, proctoring

2014

Contract Interaction Designer at You.i Labs, Kanata, ON

Designing UI interactions, meeting with clients, creating wireframes and documentation

2007–2011

Graphic Designer at Rustic Creative, Waterloo, ON

Designing and developing interactive eLearning modules, branding, and conducting social media marketing and market research. Acquired agency experience working with consumer brands and products

2006

Design Intern at Hi-Octane Creative Communications & Design Inc., Toronto, ON

Developing print and web communications for small businesses

TEACHING

UNDERGRADUATE TEACHING

Stratford School of Interaction Design and Business, University of Waterloo

Global Business and Digital Arts (GBDA) undergraduate program

Winter Term, 2020

- GBDA402 (2 sections) | Cross-Cultural Digital Business 2
- GBDA101 (2 sections) | Introduction to Digital Media Design

Fall Term, 2018

- GBDA401 (2 sections) | Cross-Cultural Digital Business 1
- GBDA302 | Extended E-portfolio 1

Winter Term, 2018

- GBDA228 (2 sections) | Digital Imaging of Online Applications
- GBDA302 | Global Media Project 2

Fall Term, 2017

- GBDA103 | User Experience Design
- GBDA401 (2 sections) | Cross-Cultural Digital Business 1

ASSISTANT TEACHING

2013–2015

School of Computer Science, Carleton University

Facilitating undergraduate group projects, tutoring, grading, and proctoring

- COMP1005 | Introduction to Computer Science I
- COMP1406 | Introduction to Computer Science II
- COMP3008 | Human-Computer Interaction

2011–2013

School of Information Technology, Carleton University

Teaching tutorials, facilitating undergraduate group projects, grading, and proctoring

- IMD1000 | Introduction to Interactive Multimedia Design
- IMD2900 | Design Studio

GUEST LECTURING

2013–2015

School of Computer Science, Carleton University

Guest lecturing in undergraduate and graduate computer science and HCI courses

- COMP 3008 | Human-Computer Interaction
- COMP 5900 | Computer Security and Usability
- HCIN 5200 | Software and User Interface Development

SCHOLARSHIPS AWARDS & HONOURS

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| • Ontario Graduate Scholarship (OGS) | 2015–2016 |
| • School of Computer Science Departmental Scholarship, Carleton University | 2013–2016 |
| • School of Computer Science Entrance Scholarship, Carleton University | 2013 |
| • GRAND NCE Digital Media Research Network Travel Scholarship | 2013 |
| • Computing Research Association (CRA-W) Travel Scholarship | 2013 |
| • School of Information Technology Entrance Scholarship | 2011 |
| • Zacks Art Gallery Student Art Competition winner, York University | 2006 |
| • Gerard Sendrey Prize winner, York University | 2006 |
| • Dean’s Honour Roll, York University | 2004 & 2007 |
| • Dean’s Honour Roll, University of Guelph | 2001–2003 |

GRANTS & FUNDING

2020–2021

Co-applicant (Submitted), the Office of the Privacy Commissioner of Canada Contributions Program for Privacy Research and Knowledge Translation, \$50,000

Research Project Title: My Digital Privacy: Improving Consumer Awareness of Information Privacy and Privacy Rights

2020–2021

Applicant, Cybersecurity and Privacy Institute Seed Grant, University of Waterloo, \$20,000.

Event Title: Hacking Privacy—A Design Jam Tackling Privacy in the Connected World

2015–2016

Applicant, Ontario Graduate Scholarship (OGS), \$15,000 per year

Highly-Qualified Personnel (HQP), the Office of the Privacy Commissioner of Canada Contributions Program for Privacy Research and Knowledge Translation, \$50,000 awarded to my Ph.D. supervisor to directly fund my research project, “Improving children’s mobile privacy awareness and behaviour”

2013–2014

Highly-Qualified Personnel (HQP), the Office of the Privacy Commissioner of Canada Contributions Program for Privacy Research and Knowledge Translation, \$50,000 awarded to my Ph.D. supervisor to directly fund my research project, “Improving mental models of security and privacy through visualizations”

2012–2015

Highly-Qualified Personnel (HQP), GRAND (Graphics, Animation, and New Media) Network of Centres of Excellence

2012–2013

Highly-Qualified Personnel (HQP), NSERC Surfnet (surface computing) strategic network

PUBLICATIONS

REFEREED JOURNAL ARTICLES

1. Zhang-Kennedy, L. and Chiasson, S. (2020) *A Systematic Review of Multimedia Tools for Cybersecurity Awareness and Education*. *ACM Computing Surveys (CSUR)*. (in submission)
2. Zhang-Kennedy, L., Abdelaziz, Y., and Chiasson, S. (2017) *Cyberheroes: The Design and Evaluation of an Interactive Ebook to Educate Children about Online Privacy*. *International Journal of Child-Computer Interaction (IJCCI)*, Elsevier, July, 13(1), p. 10-18.
3. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2016) *The Role of Instructional Design in Persuasion: A Comics Approach for Improving Cyber Security*. *International Journal of Human-Computer Interaction (IJHCI)*, Taylor & Francis, 32:215-257.

REFEREED CONFERENCE PAPERS (BLIND PEER-REVIEWED FULL PAPERS)

4. Zhang-Kennedy, L., Assal, H., Rocheleau, J., Mohamed, R., Baig, K., & Chiasson, S. (2018). *The aftermath of a crypto-ransomware attack at a large academic institution*. In *USENIX Security Symposium* (19% accept rate).
5. Zhang-Kennedy, L., Khadija, B., and Chiasson, S. (2017) *Engaging Children About Online Privacy Through Storytelling in an Interactive Comic*. In *British HCI*, ACM.
6. Zhang-Kennedy, L., Mekhail C., Abdelaziz, Y., and Chiasson, S. (2016) *From Nosy Little Brothers to Stranger-Danger: Children and Parents’ Perception of Mobile Threats*. In *Interaction Design and Children (IDC)*, ACM.
7. Zhang-Kennedy, L., Fares, E., Biddle, R., and Chiasson, S. (2016) *Geo-Phisher: The design and evaluation of information visualizations about internet phishing trends*. In *APWG eCrime*. IEEE.
8. Zhang-Kennedy, L., Chiasson, S., and P. C. van Oorschot. (2016) *Revisiting Password Rules: Facilitating Human Management of Passwords*. In *APWG eCrime*. IEEE.
9. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2014) *Stop Clicking on “Update Later”: Persuading Users They Need Up-To-Date Antivirus Protection*. In *International Persuasive Technology Conference*, Springer LNCS, 302-313 (accept rate 31%).
10. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2013) *Password Advice Shouldn’t Be Boring: Visualizing Password Guessing Attacks*. In *APWG eCrime*, IEEE.

REFEREED EXTENDED ABSTRACTS AND WORKSHOP PAPERS

11. Zhang-Kennedy, L., Mekhail C., Abdelaziz, Y., and Chiasson, S. (2016) Teaching with an Interactive E-book to Improve Children's Online Privacy Knowledge. In *Interaction Design and Children (IDC)*, ACM, pp. 1-6.
12. Zhang-Kennedy, L., Chiasson, S. (2015) Improving Children's Mobile Privacy Awareness and Behaviour. In *Symposium On Usable Privacy and Security (SOUPS)*, ACM, pp. 1-3.
13. Zhang-Kennedy, L. (2014) Persuading Secure User Behaviour at Work. In *International Persuasive Technology Conference, Adjunct Proceedings*, Springer LNCS, 126-129.
14. Mekhail, C., Zhang-Kennedy, L., Chiasson, S. (2014) Visualizations to Teach about Mobile Online Privacy. In *International Persuasive Technology Conference, Adjunct Proceedings*, Springer LNCS, 43-45.
15. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2013) Interactive Comics as Visual Narratives in Computer Security Education. In *GRAND NCE Annual Conference*, pp. 1-4.
16. Zhang-Kennedy, L. (2013) Interactive Comics as Visual Narratives in Computer Security Education. *NSERC ISSNet Strategic Network on Security*, pp. 1-2.

REFEREED POSTERS

17. Zhang-Kennedy, L., Elias F., Chiasson, S., and Biddle, R. (2015) Geo-Phisher: The Design of a Global Phishing Trend Visualization Tool. *Symposium On Usable Privacy and Security (SOUPS)*.
18. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2014) Visualizations to Teach about Mobile Online Privacy. *GRAND NCE Annual Conference*.
19. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2013) Interactive Comics as Visual Narratives in Computer Security Education. *GRAND NCE Annual Conference*.
20. Zhang-Kennedy, L., Chiasson, S., and Biddle, R. (2012) Visualizing Password Guessing Attacks. *GRAND NCE Annual Conference*.

TECHNICAL REPORTS

21. Zhang-Kennedy, L., and Chiasson, S. (2014) Using Comics to Teach Users About Mobile Online Privacy. Technical Report TR-14-02, School of Computer Science, Carleton University.

PRESENTATIONS & TALKS

CONFERENCE PRESENTATIONS

1. (July 2017) Engaging children about online privacy through storytelling in an interactive comic. British HCI. Sunderland, UK
2. (June 2016) From nosy little brothers to stranger-danger: Children and parents' perception of mobile threats. *Interaction Design and Children (IDC)*, Manchester, UK
3. (June 2016) Geo-Phisher: The design and evaluation of information visualizations about internet phishing trends. *APWG eCrime*. Toronto, ON
4. (June 2016) Revisiting password rules: Facilitating human management of passwords. *APWG eCrime*. Toronto, ON
5. (May 2014) Stop clicking on "update later": Persuading users they need up-to-date antivirus protection. *International Persuasive Technology Conference*, Padua, Italy
6. (May 2014) Interactive comics as visual narratives in computer security education. Graphics, Animation and New Media (GRAND), Ottawa, ON
7. (September 2013) Password advice shouldn't be boring: visualizing password guessing attacks. *APWG eCrime*, San Francisco, US

INVITED TALKS and PANELS

1. (January 2020) How to think like a professional designer. NSERC CREATE Collaborative Learning in Usability Experiences (CLUE), Carleton University, Ottawa, ON
2. (July 2018) User experience and design thinking (with Karin Schmidlin). IDEAS Summer Experience Program, University of Waterloo, Waterloo, ON
3. (May 2018) Panelist, INTERACTION Dialogue: Learning Through Play. The Museum: INTERPLAY, Digital Dynamics exhibition, Kitchener
4. (August 2018) Introduction to user experience and interaction design. MDEI Bootcamp, Stratford School of Interaction Design and Business, University of Waterloo, Waterloo, ON
5. (November 2016) Improving children's mobile privacy awareness and behaviour (with Sonia Chiasson). Privacy Education Project, Canadian Civil Liberties Association, Toronto, ON
6. (June 2014) What is eye-tracking? Shad Valley Summer Enrichment Program for high school students, Carleton University, Ottawa, ON
7. (September 2014) Infographics and entertaining interactive comics for improving computer security behaviour and mental models. OCICS Ottawa-Carleton Institute for Computer Science Seminar Series, Carleton University, Ottawa, ON
8. (October 2012) Visualizing password guessing attacks. Carleton Computer Security Lab (CCSL), Seminar, Carleton University, Ottawa, ON

SERVICE

PROFESSIONAL

- Reviewer for Interaction Design and Children (IDC) 2019 & 2020
- Reviewer for International Journal of Human-Computer Studies 2018
- Reviewer for Conference on Human Factors in Computing Systems (CHI) 2018
- Reviewer for Interactive Surfaces and Spaces (ISS) 2018
- Reviewer for Interaction Design and Children (IDC) 2017
- Sub-reviewer for Conference on Human Factors in Computing Systems (CHI) 2014–2016
- External reviewer for GRAND NCE, RNotes 2013

DEPARTMENTAL

- *Faculty lead on UX Design camp (in fall)* 2020
- Ad-hoc committee of new graduate programs 2019–2020
- MDEI Bootcamp Workshop 2018
- Student internship work report coordinator, Global Business and Digital Arts 2017–2018

UNIVERSITY

- Mentor at Starter Hacks 2018

COMMUNITY

- SERENE-RISC Cybersecurity Awareness Stakeholders Teleconference Participant 2019
- CAN-CWiC Women in Computing Faculty Meeting Participant 2019
- Co-organizer of UX Book Club Meetup, Kitchener-Waterloo 2018-present

OTHER ACTIVITIES

ENTREPRENEURSHIP

- Book artist of Art on Water Handmade Marbled Papers 2013–2017

MEDIA AND PRESS

- Can visual communication help individuals better protect their privacy? (My research project was featured under Dr. Sonia Chiasson) Office of the Privacy Commissioner of Canada's Real Results magazine, 2016
- Video Games & Computer Security: Fascinating Research From Two HCI Grads. Carleton Now e-magazine, Carleton University, ON. 2013

VOLUNTEERING

- Student volunteer for SERENE-RISC Workshop, Ottawa, 2014
- Student volunteer for Shad Valley summer enrichment program, Carleton University, Ottawa, 2012 & 2013
- Student volunteer for Digital Media Showcase day, Carleton University, 2012

ARTIST SHOWS

- Exhibitor at Heart, Home & Handmade show, 2014
- Exhibitor at Glebe Craft Fair, 2012-2013
- Exhibitor at Carleton University Art Gallery, 2013
- Exhibitor at Ottawa Book Arts Show, 2012
- Exhibitor at Lovely Ladies: Ottawa Women's Small Business Fair & Fundraiser, 2012

LANGUAGES

English (Native Speaker)
Mandarin Chinese (Fluent)