

Curriculum Vitae

Fateme Rajabiyazdi, PhD, PEng, MSc, BEng

Department of Systems and Computer Engineering

Faculty of Engineering and Design

Carleton University

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Work Experience

Assistant Professor - Carleton University, Canada

Jan 2021*–present

Department of Systems and Computer Engineering

* Official start was in Jan 2021, while I applied for NSERC DG in Fall 2020 and successfully obtained it in 2021.

Cross-Appointed School of Information Technology

Sep 2021–present

This cross-appointment is due to my research involvement in the field of Human-Computer Interaction, which is the primary research focus at the School of Information Technology. This cross-appointment allows me to supervise students from the School of IT and use their research equipment if not in use. My duties and responsibilities are not split between my home department, Systems and Computer Engineering and the School of the School of Information Technology and 100% of my assignment is with the Department of Systems and Computer Engineering.

Affiliate Investigator - Bruyère Research Institute, Canada

Jun 2023–present

Bruyère Research Institute

As a result of my collaboration in clinical projects with clinicians and researchers at the Bruyère Research Institute (BRI), I was granted an Affiliate Investigator title with BRI. The affiliation will allow me to have access to patients and collaborate with clinicians and researchers at BRI. This affiliation does not mandate me with any research or teaching assignments with BRI.

Postdoctoral Fellow - McGill University, Canada

Jan 2019–Oct 2020

Department of Surgery

Funding: Awarded the Postdoctoral Scholarship, Fonds de recherche du Québec – Santé (FRQS) and Mitacs

Primary Supervisor: Dr. Julio Fiore, Assistant Professor, Director – Surgical Scientist Program

Project Leaders: Dr. Liane Feldman, Edward W. Archibald Professor - Chair, Department of Surgery, McGill University

Project Leaders: Dr. Nancy Mayo, James McGill Professor

Data Visualization Researcher - Alberta Innovates - W21C, Canada

Sep 2015–Oct 2018

Funding: Ward of 21st Century Doctoral Scholarship, Alberta Innovates

Project Leader: Dr. William Ghali, Professor, Scientific Director, O'Brien Institute for Public Health at the University of Calgary

Education

PhD in Computer Science - Information Visualization - University of Calgary

2014–2018

Thesis: Exploring the Design of Visualizations to Facilitate Patient-Provider Communication

My thesis examiner committee nominated my thesis for two awards:

**Thesis Nominations:* Bill Buxton Dissertation Award

**Thesis Nominations:* IEEE Visualization and Graphics Technical Community for Doctoral Dissertation Award

Primary Supervisor: Dr. Sheelagh Cpendale, Professor, Former Tier 1 Canada Research Chair in Information Visualization

Co-Supervisor: Dr. Lora Oehlberg, Associate Professor

Master of Computing - Human-Computer Interaction - Australian National University

2010–2012

Thesis: Design and Development of Interfaces for Different Tablet Sizes

Supervisors: Dr. Tom Gedeon and Dr. Duncan Stevenson

Bachelor of Software Engineering - University of Tehran

2006–2010

Research

Grants (Total: over \$1.66 M CAD)

Principal Investigator (11 Grants, Total: \$934,702 CAD)

Under Review

G13. **2024 AgeTech Advance: Healthy Aging Research Program (HARP)** 2024-2025
Electronic Memory Support System (eMSS): An Innovative Electronic Tool for Care of Older Adults
Role: Principal Investigator, Requested: \$122,698

G12. **NSERC Alliance International Catalyst** 2024-2025
Development of Medical Large Language Models Guidelines for Patients Seeking Health Information
Role: Principal Investigator, Requested: \$25,000

Accepted

G11. **Natural Sciences and Engineering Research Council of Canada (NSERC) Discovery Grant** 2021-2026
Exploring the Design and Development of Patient Data Visualizations on Shared Displays
Role: Principal Investigator, Granted: \$132,500 CAD (\$24,00 per year + \$12,500 CAD One Time Supplement)

G10. **Collaborate 2 Commercialize (C2C) - Ontario Centre of Innovation (OCI)** 2024-2025
Intelligent Insights – Patient Transfers
Role: Principal Investigator, Granted: \$300,000 CAD
Collaborator: Bruyère Research Institute
Industry Partner: Able Innovations Inc., a robotic medical device venture founded in 2018.

G9. **Canada Foundation for Innovation - John R. Evans Leaders Fund (CFI-JELF)** 2023-2025
Clinical Decision-Making on Large High-Resolution Displays (LHRDs)
Role: Principal Investigator, Granted: \$217,302 CAD

G8. **National Research Council (NRC) Aging in Place Challenge** 2022-2025
Evaluation and Adaptation of Assistive Technologies for Older Adults
Role: Principal Investigator, Granted: \$90,000 CAD
Collaborator: Dr. Hélène Fournier, NRC

G7. **Multidisciplinary Research Catalyst Fund (MRCF)** 2022-2024
Canadian Futuristic Health Data Visualization Center
Role: Principal Investigator, Granted: \$50,000 CAD
Within a year of my appointment at Carleton University, I established an extensive collaboration that allowed me to successfully secure this grant to establish Canada's first center to design, develop, and deploy intuitive and engaging interactive data visualization systems that can support data analysis and communication of complex health data. Our team had interdisciplinary researchers from multiple disciplines, faculties, and universities and included early and established researchers.

Co-applicants: I had 8 co-applicants, 4 from Carleton University: Dr. Juan Jiménez Garcia, Assistant Professor, School of Industrial Design; Dr. Omair Shafiq, Associate Professor, School of Information Technology; Dr. Sreeraman Rajan, Professor, Department of Systems & Computer Engineering; Dr. Adrian Chan, Professor, Department of Systems & Computer Engineering. Also, our team had 4 co-applicants from the University of Ottawa: Dr. Ran Klein, Associate Professor, Department of Medicine; Dr. Glenn Wells, Associate Professor, Department of Medicine; Dr. Robert DeKemp, Professor, Department of Medicine; Dr. Babak Rashidi, Assistant Professor, Department of Medicine.

G6. **Natural Sciences and Engineering Research Council of Canada (NSERC) Alliance - Ontario Centre of Innovation (OCI) Voucher for Innovation and Productivity (VIP)** 2022-2023
Qualitative Data Visualization Dashboard
Industry Partner: NovaceneAI, an Artificial Intelligence focused company founded in 2020.
Role: Principal Investigator, Granted: \$60,000 CAD

G5. **Carleton University Experiential Learning Fund (CUELF)** 2022-2023
EXPeriential-learning for ANalyzing Data (EXPAND) Program
Role: Principal Investigator, Granted: \$6,000 CAD
Co-applicant: Dr. James Green, Department of Systems and Computer Engineering, Carleton University
Co-applicant: Dr. Hoda Khalil, Contract Instructor, Department of Systems and Computer Engineering, Carleton University

G4. Scholarship of Teaching and Learning (SoTL)	2021-2022
<i>Critical Reflections on Teaching Data Visualizations to Students with Engineering Backgrounds</i>	
Role: Principal Investigator, Granted: \$5,000 CAD	
G3. Carleton Faculty of Engineering and Design	2021
<i>Multitaction Table Display</i>	
Role: Principal Investigator, Granted: \$50,000 CAD	
G2. Carleton Research Internship - Undergrad Students (I-CUREUS) (Funding received for specific HQP)	2021-2024
<i>Summer 2024, Winter 2024, Fall 2023, Fall 2022, Winter 2022, Fall 2021, Summer 2021</i>	
Role: Supervisor, Granted: \$13,500 CAD	
G1. Career Ready Technation Canada; NSERC USRA (External Funding received for specific HQP)	2021, 2022
<i>Design and Development of a Wearable Pain Tracker</i>	
Role: Supervisor, Granted: \$10,400 CAD	

Co-Applicant (6 Grants, Total: \$733,438 CAD)

G6. Canadian Institutes of Health Research (CIHR) Project Grant - Fall 2021 and Spring 2022-2027	2022-2027
<i>The OPERa Study: A Multicenter Observational Prospective Cohort Study to Evaluate Determinants of Long-Term Quality of Life Following Restorative Proctectomy for Rectal Cancer Treatment</i>	
Role: Co-Applicant, PI: Dr. Marylise Boutros, McGill University - Jewish General Hospital, Granted: \$558,450 CAD	
G5. Bruyere Foundation	2023-2024
Electronic Memory Support System: An Innovative Digital Calendar for Older Adults with Mild Cognitive impairment	
Role: Co-Applicant, PI: Dr. Neil Thomas, Bruyere Research, Granted: \$19,288 CAD	
G4. Carleton University Research Development Grants NSERC Early Career Researcher	2023-2024
Data-Physicalization for Youth Mental Health: A Human-Centered Approach	
Role: Co-Applicant, PI: Dr. Juan Garcia, Carleton University, School of Industrial Design, Granted: \$10,000 CAD	
G3. Multidisciplinary Research Catalyst Fund (MRCF)	2022-2024
<i>Socially-inclusive Extended Reality (XR) Systems for Multi-User Collaboration and Communication</i>	
Role: Co-Applicant, PI: Dr. Robert Teather, Carleton University Granted: \$50,000 CAD	
G2. Special Interest Group on Computer-Human Interaction (SIGCHI) Development Fund	2023
<i>Graphics Interface (GI'23) Early Career Researcher Mentorship and Panel</i>	
Role: Co-Applicant, PI: Dr. Sowmya Somanath, University of Victoria, Granted: \$3,500 USD	
G1. American Society of Colorectal Surgeons	2022-2023
<i>Consensus Development on the Definition, Grading and Reporting of Colorectal Anastomotic Leak</i>	
Role: Co-Applicant, PI: Dr. Patricia Sylla, Icahn School of Medicine at Mount Sinai, Granted: \$67,500 USD	

Collaborator (2 Grants)

G2. Canadian Institutes of Health Research (CIHR) Planning and Dissemination Grant	2019
<i>Transforming Post-Fracture Acute Pain Management in Older Men/Women through mHealth Application</i>	
Role: Collaborator, PI: Dr. Suzanne Morin, McGill University Health Center	
G1. Canadian Institutes of Health Research (CIHR) Project Grant - Fall 2019	2019
<i>Opioid versus Opioid-Free Analgesia After Surgical Discharge: A Systematic Review and Meta-Analysis</i>	
Role: Collaborator, PI: Dr. Julio Fiore, McGill University Health Center	

Applied Not Granted - Principal Investigator (5 Grants)

G5. New Frontiers in Research Fund (NFRF) Exploration	2023
<i>Digital Storytelling for Patient with Dementia</i>	
Role: Principal Investigator, Total request: \$250,000 CAD	
G4. Google Award for Inclusion Research	2023
<i>Developing an Interactive Data Visualization System Representing Recovery Progress after a Stroke for Patients with Cognitive Impairment and/or Aphasia</i>	
Role: Principal Investigator, Total request: \$60,000 USD	
G3. New Frontiers in Research Fund (NFRF) Exploration	2022
<i>Data-Centric Technological Solutions to Empower Patient-Clinical Team Interaction</i>	
Role: Principal Investigator, Total request: \$250,000 CAD	

- G2. **Natural Sciences and Engineering Research Council of Canada (NSERC) Research Tools & Instruments** 2022
Multitouch Displays to Collaboratively Interact with Health Data
 Role: Principal Investigator, Total request: \$140,000 CAD
- G1. **National Research Council (NRC) Aging in Place Challenge** 2021
Development of Mobile Health Apps and Visualizations for Monitoring Mental Health Conditions in Older Adults
 Role: Principal Investigator (Academic), NRC PI: Dr. H el ene Fournier, Total request: \$492,400 CAD

External Awards and Scholarships (5)

5. **New Faculty Excellence in Teaching Award**, Carleton University 2024
4. **Early Career Researcher Award**, Canadian Medical and Biological Engineering Society (CMBES) 2023
3. **Outstanding Publication Committee Award**, IEEE Ottawa Section 2022
2. **Postdoctoral Scholarship, Fonds de Recherche du Qu ebec – Sant e (FRQS)**, \$45,000 CAD 2020–2021
1. **Ward of 21st Century Doctoral Scholarship**, Alberta Health Services, \$60,000 CAD 2015–2017

Internal Awards and Nominations (4)

4. **Nomination for Individual Service Excellence**, Carleton University 2022
3. **Nomination for Co-op Employer of the Year**, Carleton University 2021
2. **Computer Science Department Research Award**, University of Calgary, \$8,000 CAD 2016–2017
1. **Computer Science Department Research Award**, University of Calgary, \$10,000 CAD 2014–2016

Tri-Council Review Committees (2)

2. **Review Panel, NSERC Research Tools and Instruments (RTI)** 2024–2025
 Computer, Mathematical, and Statistical Sciences Committee, TBD applications
1. **Review Panel, NSERC Research Tools and Instruments (RTI)** 2023–2024
 Computer, Mathematical, and Statistical Sciences Committee, 31 applications

Consulting with Governments and Hospitals (2)

2. **Data Visualization Consultant, Quebec Ministry of Health and Social Services (MSSS)** Jan 2023–Jul 2024
 Outcomes: I was invited to this project by the head of the Department of Surgery at Montreal General Hospital. We designed, developed, and deployed an interactive data visualization system for hospitals in Quebec to monitor their health outcomes.
1. **Data Scientist Consultant, McGill University Health Center, Surgery Quality Improvement Board** Apr 2020–Jul 2020
 Outcomes: Our team was involved in analyzing surgical outcome indicators at McGill University Health Center and suggest ways to improve the quality of care.

Invited International Research Visits (2)

2. **Stanford University, United States** Jul 2024
Talk Title: Data Visualization Education and Literacy: Challenges and Opportunities
Research Project: Guidelines for Developing Large Language Models for Patients
Collaborator: Dr. Hari Subramonyam
 Outcomes: Initiated a research project; submitted an NSERC Alliance Catalyst grant 2024; 1 PhD HQP working on the project.
1. **Dagstuhl Seminar, Germany** Jun 2022
Talk Title: Teaching Data Visualization Free From
Research Project: Visualization Empowerment: How to Teach and Learn Data Visualization
 Outcomes: Published 1 journal (J15), Published 2 workshop papers (W4, W5), Chaired/Co-organized two workshops (W6, W7) at IEEE VIS, the most prestigious visualization conference.

Knowledge and Technology Transfer (5)

5. **Memory Support System Mobile App** - Bruyere Hospital and Mayo Clinic (USA) 2023–present
The goal of this project is to develop an electronic version of the current Memory Support System, which is an evidence-based, calendar-based intervention for individuals with mild cognitive impairment (MCI), used in the Mayo Clinic’s HABIT program.
4. **Quebec Hospitals Surgical Outcome Tracker** - Quebec Ministry of Health and McGill University 2023–present
This data visualization system enables surgical units across Quebec to track and analyze the quality of care offered to patients. Hospitals can view a summary of patient demographics, complication rates, readmission rates, etc.
3. **TextVista** - NovaceneAI Company (Ottawa) 2022-2023
We designed and developed, TextVist, an interactive data visualization system to enable NovaceneAI customers to analyze their text data.
2. **Mobile App to Track and Suggest Pain Management** - McGill University Health Center 2020–2022
PainApp is the first mobile application that was developed with a user-centred design approach to support older adults in managing their pain after a fracture. I was the co-principal investigator in the project, leading the design team.
1. **MyCareCompass** - W21C and Alberta Health 2018–2020
MyCareCompass is the first platform designed for patients with chronic conditions in Alberta to manage their care. My PhD research and data visualization designs were incorporated into this platform.

Publications (76)

Type of Publication	Since joining Carleton (2021)	Total
Peer Reviewed Journals	14	17
Submitted Journals	1	1
Peer Reviewed Conference Proceedings	6	14
Submitted Conference Proceedings	1	1
Book Chapters	1	1
Juried Publications	5	5
Abstracts and Posters	16	23
Workshops	4	7
Opinions	1	1
Theses	0	2
Supervised Theses	4	4
Total	53	76

Table 1: Publication Record.

I work in an interdisciplinary area of research, designing technological solutions for healthcare. I publish my work with technological contributions (e.g., information visualization systems and mobile applications) at conferences; the top venues in these areas are most often conferences. These conferences are typically organized by either the Association for Computing Machinery (ACM) or the Institute of Electrical and Electronics Engineers (IEEE).

They are highly selective forums, publish archival papers, and exceed many journals in their impact, selectivity, and visibility (Source: [Chen & Konstan](#)). Some of these conferences use a hybrid format, where they publish the accepted papers in a special issue of their associated journal.

I publish the results of my work with contributions to enhancing health outcomes in the relevant medical journals. I target journals based on their relevance; journals such as the Journal of the American Medical Association Surgery, the Journal of Medical Internet Research, Quality of Life Research, Surgical Endoscopy, Colorectal Disease, and The Lancet. These journals have low acceptance rates ranging from 5% to 30% and high impact factors (IF) ranging from 2.9 to **98.4**. A summary of my publications is available in the table below (see Table 1).

Since joining Carleton University in 2021, I have built myself as an independent researcher. My citations have increased every year since 2021, from 18 citations in 2021; to 52 in 2022; to 83 citations in 2023; up to 104 up to mid-September 2024. I have a total of 316 citations up to mid-September 2024 and an h-index of 9 (see Figure 1).

	All	Since 2019
Citations	316	286
h-index	9	9
i10-index	9	8

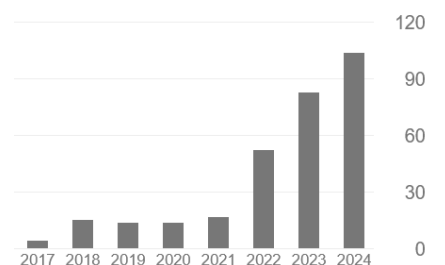


Figure 1: [Google Scholar](#) (My yearly citations has increased since 2021.)

Summary of publications with my HQP

Underlined and starred names* indicates HQP at Carleton University that I was the primary supervisor.

As the primary supervisor, I co-authored **2 journal papers with my Carleton HQP**: 1 conditionally accepted + 1 under review.

One journal, J17, resulted from my PhD student's (Mahsa Sinaei Hamed) thesis work. This journal submission has been conditionally accepted. The journal will be published as part of the Proceedings of the ACM on Human-Computer Interaction (PACM HCI) journal. Impact factor is 3.74.

One journal, J18, has been submitted as the result of my PhD student's (Shri Harini Ramesh) thesis work. The Journal of Medical Internet Research publishes contributions between health and technology with an Impact Factor of 5.8. The submission is pending review. This work is funded by NRC, hence our NRC collaborator is included as an author.

J17. Mahsa Sinaei Hamed*, Pak Kwan, Matt Klich, Jillian Aurisano, and **Fateme Rajabiyazdi**. (2024). The Elephant in the Room: Expert Experiences Designing, Developing and Evaluating Data Visualizations on Large Displays. *ACM Interactive Surfaces and Spaces*, To appear at *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)* (Accepted), 1-30.

Journal: This journal publishes high-quality research in the field of human-computer interaction; Impact factor is 3.74

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

J18. Shri Harini Ramesh*, Darwin Jull*, Helene Fournier, and **Fateme Rajabiyazdi**. (2024). Exploring Barriers to Patients' Progression in the Cardiac Rehabilitation Journey from Healthcare Providers' Perspectives: Qualitative Study. Submitted to *Journal of Medical Internet Research* (under review)

Journal: This journal publishes work in the fields of medical informatics and eHealth; Impact Factor is 5.8

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

As most of my HQP at Carleton University are in the engineering and computer science field, most of their work is published in conferences. My **5 peer-reviewed long conference publications with HQP** are C14, C13, C12, C11, C10. Each paper was reviewed by 2 members of the Papers Program Committee plus 1 or more external reviewers. All of the reviewers provided independent reviews, recommendations, and scores. The acceptance rate for these publications ranges between 30% to 50%.

C14. Shri Harini Ramesh*, **Fateme Rajabiyazdi**. (2024). Challenges and Opportunities of Teaching Data Visualization Together with Data Science. In *Proceedings of 2024 IEEE VIS Workshop on Visualization Education, Literacy, and Activities (EduVis)*, pp. 1-7. <https://doi.org/10.48550/arXiv.2409.05969> (To appear at the IEEE Xplore)

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

C13. Shri Harini Ramesh*, Alicia Ouskine*, Elahe Khorassani*, Mona Ebrahimipour, Hillel Finestone, Adrian D.C. Chan, and **Fateme Rajabiyazdi**. (2024). A Data Visualization Tool to Facilitate Patient-Healthcare Provider Communication During Inpatient Stroke Rehabilitation. In *Proceedings of the 50th Graphics Interface Conference (GI'24)*, pp. 1-12. <https://openreview.net/pdf?id=HSPRA1VW9I> (To appear at the ACM Digital Library)

 Best Student Paper Award, selected 1 out of 37 accepted papers.

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

C12. **Fateme Rajabiyazdi**, Shri Harini Ramesh*, Beck Langstone*, Daniil Kulik*, and Justin Pontalba. (2024). TextVista: NLP-Enriched Time-Series Text Data Visualizations. In *Proceedings of the 50th Graphics Interface Conference (GI'24)*, pp. 1-14. <https://openreview.net/pdf?id=CX4uT5cauk> (To appear at the ACM Digital Library)

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

C11. Mahsa Sinaei Hamed*, Laura Reid*, Alice Olorunnife*, David Casciano*, and **Fateme Rajabiyazdi**. (2023). Designing and Developing a Mobile Application for Monitoring & Visualizing Blood Pressure Data. In *Proceedings of IEEE Sensor Applications Symposium (SAS)*, pp. 1-6, doi: [10.1109/SAS58821.2023.10253972](https://doi.org/10.1109/SAS58821.2023.10253972)

Role: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

C10. Connor Haberl*, Graham Cook, Andrew Crean, Calum Redpath, **Fateme Rajabiyazdi**, and Robert DeKemp. (2023). A 4D Visualization Tool for Treatment Planning of Non-Invasive Radioablation in Patients with Ventricular Tachycardia. In *Proceedings of SPIE Medical Imaging*, pp. 206-213. <https://doi.org/10.1117/12.2654482>

Role: Co-Principal Investigator: supervision, co-writing

I encourage my HQP to disseminate their work in the form of short papers and posters at relevant conferences. These are juried based on a 2-3 page summary and presented at the conference by HQP. At least two to three reviewers carefully read each submitted work and reported comments (ensuring no conflict of interest). The chairs afterwards discussed the merits of the work, striving for a well-balanced program with an interesting set of topics for the audience. These **5 juried conference short publications with HQP** are P1-5.

Role in P1-P5: Principal Investigator: Funding, supervision, study design and data analysis, co-writing

P5. Faisal Roshan Zaki*, Abhishek Ahuja*, and **Fateme Rajabiyazdi**. (2024). *IEEE VIS: Visualization & Visual Analytics Conference, Progressive Data Analysis and Visualization Workshop*, (St. Pete Beach, Florida, USA, October), pp. 1-4.

P4. Mahsa Sinaei Hamed*, Pak Kwan, Matt Klich, Jillian Aurisano, and **Fateme Rajabiyazdi**. (2023). Expert Experiences Designing, Developing and Evaluating Data Visualizations on Large Displays. *IEEE VIS: Visualization & Visual Analytics Conference*, (Melbourne, Australia, October), pp. 1-2.

P3. Beck Langstone* and **Fateme Rajabiyazdi**. (2022). Co-Designing Unstructured Text Data Visualization Systems. *The 48th Graphics Interface Conference*, (Montreal, Canada, May), pp. 1-2, <https://doi.org/10.48550/arXiv.2407.02611>.

P2. Alicia Ouskine*, Adrian D.C. Chan, and **Fateme Rajabiyazdi**. (2022). Designing Interactive Data Visualizations Representing Recovery Progress for Patients After Stroke. *The 48th Graphics Interface Conference*, (Montreal, Canada, May), pp. 1-2, <https://doi.org/10.48550/arXiv.2402.11590>.

P1. Arsh Saleem*, Beck Langstone*, Alicia Ouskine*, and **Fateme Rajabiyazdi**. (2022). Design and Development of PainBit: Portable Device for Supporting Patients with Chronic Pain to Log their Pain. *The 48th Graphics Interface Conference*, (Montreal, Canada, May), pp. 1-2, <https://doi.org/10.48550/arXiv.2407.02697>.

I have published my research on enhancing health outcomes in medical journals. I actively publish with HQP working with my medical collaborators. For some of these publications, I have directly supervised the students whose names* are indicated with a star. These contributions are indicated as a shared Principal Investigator (J11 and J16).

These **3 journal publications with clinician collaborators' (McGill University) HQP** are J16, J14, J11.

J16. Vincent Brissette*, Nasra Al Busaidi, Olivia Monton*, Jenny Moon, Marie Demian, Carol-Ann Vasilevsky, Sarah Faris, **Fateme Rajabiyazdi**¹, Marylise Boutros¹. (2024) Exploring Patients' Needs and Expectations for Information on Sexual Dysfunction After Rectal Cancer Treatment: A Qualitative Study. *Colorectal Disease*; 00: 1–9. <https://doi.org/10.1111/codi.17048>

Journal: This journal is focused on colorectal pathology; Acceptance rate is 30%; Impact Factor is 2.9

Role: ¹Shared Principal Investigator: Mentorship, study design and data analysis, co-writing

J14. Olivia Monton*, Allister Smith, Jeongyoon Moon, Marie Demian, Richard Garfinkle, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2023) An Online Educational and Supportive Care Application for Rectal Cancer Survivors with Low Anterior Resection Syndrome: A Mixed Methods Pilot Study. *Colorectal Disease* 00: 1–9. <https://doi.org/10.1111/codi.16665>

Journal: This journal is focused on colorectal pathology; Acceptance rate is 30%; Impact Factor is 2.9

Role: Co-Principal Investigator: Mentorship, study design and data analysis, co-writing

J11. Kevin Tran-Nguyen*, Caroline Berger*, Roxanne Bennett, Michelle Wall, Suzanne Morin, and **Fateme Rajabiyazdi**². (2022). Mobile App Prototype in Older Adults for Postfracture Acute Pain Management: User-Centered Design Approach. *Journal of Medical Internet Research Aging*, 5(4):e37772, <https://doi.org/10.2196/37772>.

Journal: JMIR Aging is focused on aging and big data analytics; Impact factor is 5.0

Role: ²Shared Principal Investigator: Supervision, study design and data analysis, co-writing

Summary of my independent prominent publications

In addition, I authored publications as a result of my PhD or postdoctoral research and with my collaborators.

My **top 3 prominent medical journals**, where I contributed significantly and published in impactful venues are J5, J7, J10.

J5. **Fateme Rajabiyazdi**, Roshni Alam, Aditya Pal, Joel Montanez, Susan Law, Nicolò Pecorelli, Yusuke Watanabe, Luciana D. Chiavegato, Massimo Falconi, Satoshi Hirano, Nancy E. Mayo, Lawrence Lee, Liane S. Feldman, Julio F. Fiore Jr (2021). What Does 'Recovery' Mean to Patients Undergoing Abdominal Surgery? An International Qualitative Study. *JAMA Surgery*, 156(8): 758–765, <https://doi.org/10.1001/jamasurg.2021.1557>

Journal: JAMA Surgery journal is the best journal in surgery; Acceptance rate is 13%; Impact Factor is 15.7

Role: Concept and design, Acquisition, analysis and interpretation of data, Drafting and revisions of the manuscript.

J7. Julio F Fiore Jr., Charbel El-Kefraoui, Marc-Aurele Chay, Philip Nguyen-Powanda, Uyen Do, Ghadeer Olleik, **Fateme Rajabiyazdi**, Araz Kouyoumdjian, Alexa Derksen, Tara Landry, Alexandre Amar-Zifkin, Amy Bergeron, Agnihotram V Ramanakumar, Marc Martel, Lawrence Lee, Gabriele Baldini, and Liane S Feldman (2022). Opioid versus opioid-free analgesia after surgical discharge: A Systematic Review and Meta-Analysis of Randomised Controlled Trials. *The Lancet*, 399(10343), 2280-2293, [https://doi.org/10.1016/S0140-6736\(22\)00582-7](https://doi.org/10.1016/S0140-6736(22)00582-7)

Journal: The Lancet is the world's highest-impact medical journals; Acceptance rate is 5%; Impact Factor is 98.4

Role: Acquisition and analysis of data, Revisions of the manuscript.

J10. Maryam Mozafarina, **Fateme Rajabiyazdi**, Marie-Josée Brouillette, Lesley K. Fellows, Bärbel Knäuper, and Nancy E. Mayo (2022). Effectiveness of a Personalized Health Profile on Specificity of Self-Management Goals Among People Living with HIV in Canada Findings from a Blinded Pragmatic Randomized Controlled Trial. *Quality of Life Research*, 32, 413–424, <https://doi.org/10.1007/s11136-022-03245-5>

Journal: Quality of Life Research journal is a prominent venue in health services and outcomes; Impact Factor is 3.3

Role: Concept and design, Developed the computational program, Data analysis, Revisions of the manuscript.

I have a publication, J15, at the Information Visualization conference, where its proceeding is published as a special issue in the IEEE Transactions on Visualization and Graphics (TVCG). The authors are ordered per their contributions. This work is the result of the Dagstuhl Seminar 2022 collaboration, where I led a sub-group of authors.

J15. Benjamin Bach, Mandy Keck, **Fateme Rajabiyazdi**, Tatiana Losev, Isabel Meirelles, Jason Dykes, Robert S. Laramée, Mashaël AlKadi, Christina Stoiber, Samuel Huron, Charles Perin, Luiz Morais, Wolfgang Aigner, Doris Kosminsky, Magdalena Boucher, Søren Knudsen, Areti Manataki, Jan Aerts, Uta Hinrichs, Jonathan C Roberts, Sheelagh Cappendale. (2023) Challenges and Opportunities in Data Visualization Education: A Call to Action. *IEEE Transactions on Visualization and Computer Graphics*. 30(1): 649-660, <https://doi.org/10.1109/TVCG.2023.3327378>

Journal: Top journal in Information Visualization is IEEE TVCG; Acceptance rate is <25%; Impact Factor is 4.7

Role: The authors are ordered based on contributions, my place 3rd indicates significant contributions, including designing, running, and co-analyzing the survey; leading discussions for one major part of the work, and writing the results.

I have published my PhD research in highly competitive interdisciplinary conferences. One example is the International Conference on Pervasive Computing Technologies for Healthcare (Pervasive Health), which focuses on research and innovations at the intersection of pervasive computing, healthcare, and digital health technologies. The acceptance rate in 2017 was 25%.

C7. **Fateme Rajabiyazdi**, Charles Perin, Jo Vermeulen, Haley MacLeod, Diane Gromala, and Sheelagh Cappendale. 2017. Differences that matter: in-clinic communication challenges. In Proceedings of the 11th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth'17). ACM, 251–260. <http://doi.acm.org/10.1145/3154862.3154885>.

I am leading the organization of a workshop at IEEE VIS, the most prestigious conference in the field of data visualization. It is highly competitive to secure a workshop placement. At least three workshop chairs read each proposal and reported comments (ensuring no conflict of interest). The chairs discussed the merits of the proposals, striving for a well-balanced program with a diverse set of topics of interest to a large audience. The acceptance rate for these workshop proposals is 20%-30%.

W7. **Fateme Rajabiyazdi**, Mandy Keck, Christina Stoiber, Jonathan C. Roberts, Hari Subramonyam, Lily Ge, Magdalena Boucher, Benjamin Bach. (2024). EduVis: 2nd IEEE VIS Workshop on Visualization Education, Literacy, and Activities. *IEEE Visualization Workshop*, (5 pages), <https://iee-educvis.github.io/IEEE-EduVis-Workshop-2024.pdf>.

Peer Reviewed Journal Publications (17)

Under Review

J18. [Shri Harini Ramesh*](#), [Darwin Jull*](#), Helene Fournier, and **Fateme Rajabiyazdi**. (2024). Exploring Barriers to Patients' Progression in the Cardiac Rehabilitation Journey from Healthcare Providers' Perspectives: Qualitative Study. Submitted to *Journal of Medical Internet Research* (Under Review).

Accepted

J17. [Mahsa Sinaei Hamed*](#), Pak Kwan, Matt Klich, Jillian Aurisano, and **Fateme Rajabiyazdi**. (2024). The Elephant in the Room: Expert Experiences Designing, Developing and Evaluating Data Visualizations on Large Displays. *ACM Interactive Surfaces and Spaces*, To appear at *Proceedings of the ACM on Human-Computer Interaction (PACM HCI)* (Conditionally Accepted), 1-22.

J16. Vincent Brissette*, Nasra Al Busaidi, Olivia Monton*, Jenny Moon, Marie Demian, Carol-Ann Vasilevsky, Sarah Faris, **Fateme Rajabiyazdi**¹, Marylise Boutros¹. (2024) Exploring Patients' Needs and Expectations for Information on Sexual Dysfunction After Rectal Cancer Treatment: A Qualitative Study. *Colorectal Disease*; 00: 1–9. <https://doi.org/10.1111/codi.17048> (¹Shared senior investigator role)

J15. Benjamin Bach, Mandy Keck, **Fateme Rajabiyazdi**², Tatiana Losev, Isabel Meirelles, Jason Dykes, Robert S. Laramee, Mashael AlKadi, Christina Stoiber, Samuel Huron, Charles Perin, Luiz Morais, Wolfgang Aigner, Doris Kosminsky, Magdalena Boucher, Søren Knudsen, Areti Manataki, Jan Aerts, Uta Hinrichs, Jonathan C Roberts, Sheelagh Carpendale. (2023) Challenges and Opportunities in Data Visualization Education: A Call to Action. *IEEE Transactions on Visualization and Computer Graphics*, 30(1):649-660, <https://doi.org/10.1109/TVCG.2023.3327378> (²Author list is ordered based on contributions.)

J14. Olivia Monton*, Allister Smith, Jeongyoon Moon, Marie Demian, Richard Garfinkle, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2023) An Online Educational and Supportive Care Application for Rectal Cancer Survivors with Low Anterior Resection Syndrome: A Mixed Methods Pilot Study. *Colorectal Disease* 00: 1–9. <https://doi.org/10.1111/codi.16665>

J13. Makena Pook, Tahereh Najafi, Maxime Lapointe-Gagner, Philip Nguyen-Powanda, Hiba Elhaj, **Fateme Rajabiyazdi**, Pepa Kaneva, Lawrence Lee, Liane S. Feldman, and Julio Fiore. (2023) Patients' Experiences Undergoing Cancer Surgery During the COVID-19 Pandemic: A Qualitative Study. *Support Care Cancer* 31, 400. <https://doi.org/10.1007/s00520-023-07861-w>

J12. Natasha Caminsky, Jeongyoon Moon, Nancy Morin, Karim Alavi, Rebecca C. Auer, Liliana G. Bordeianou, Sami A. Chadi, Sébastien Drolet, Amandeep Ghuman, Alexander Sender Liberman, Tony MacLean, Ian M. Paquette, Jason Park, Sunil Patel, Scott R. Steele, Patricia Sylla, Steven D. Wexner, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2023) Patient and Surgeon Preferences for Early Ileostomy Closure Following Restorative Proctectomy for Rectal Cancer – Why Aren't We Doing It? *Surgical Endoscopy*, 37, 669–682, <https://doi.org/10.1007/s00464-022-09580-5>.

J11. Kevin Tran-Nguyen*, Caroline Berger*, Roxanne Bennett, Michelle Wall, Suzanne Morin, and **Fateme Rajabiyazdi**³. (2022). Mobile App Prototype in Older Adults for Postfracture Acute Pain Management: User-Centered Design Approach. *Journal of Medical Internet Research Aging*, 5(4):e37772, <https://doi.org/10.2196/37772>. (³Shared senior investigator role)

J10. Maryam Mozafarina, **Fateme Rajabiyazdi**, Marie-Josée Brouillette, Lesley K. Fellows, Bärbel Knäuper, and Nancy E. Mayo (2022). Effectiveness of a Personalized Health Profile on Specificity of Self-Management Goals Among People Living with HIV in Canada Findings from a Blinded Pragmatic Randomized Controlled Trial. *Quality of Life Research*, 32, 413–424, <https://doi.org/10.1007/s11136-022-03245-5>.

J9. Uyen Do, Makena Pook, Tahereh Najafi, **Fateme Rajabiyazdi**, Charbel El-Kefraoui, Saba Balvardi, Natasha Barone, Hiba Elhaj, Philip Nguyen-Powanda, Lawrence Lee, Gabriele Baldini, Liane S. Feldman, and Julio F. Fiore (2022). Opioid-free Analgesia after Outpatient General Surgery: A Qualitative Study Focused on the Perspectives of Patients and Clinicians Involved in a Pilot Trial. *Surgical Endoscopy*, 1-12, <https://doi.org/10.1007/s00464-022-09472-8>.

J8. Uyen Do, Charbel El-Kefraoui, et al., **Fateme Rajabiyazdi**, Nadia Safa, Nawar Touma, Francine Tremblay. (2022). Feasibility of Prospectively Comparing Opioid Analgesia With Opioid-Free Analgesia After Outpatient General Surgery: A Pilot Randomized Clinical Trial. *JAMA Netw Open*, 5(7):e2221430, <https://doi.org/10.1001/jamanetworkopen.2022.21430>.

J7. Julio F Fiore Jr., Charbel El-Kefraoui, Marc-Aurele Chay, Philip Nguyen-Powanda, Uyen Do, Ghadeer Olleik, **Fateme Rajabiyazdi**, Araz Kouyoumdjian, Alexa Derksen, Tara Landry, Alexandre Amar-Zifkin, Amy Bergeron, Agnihotram V Ramanakumar, Marc Martel, Lawrence Lee, Gabriele Baldini, and Liane S Feldman (2022). Opioid versus opioid-free analgesia after surgical discharge: A Systematic Review and Meta-Analysis of Randomised Controlled Trials. *The Lancet*, 399(10343), 2280-2293, [https://doi.org/10.1016/S0140-6736\(22\)00582-7](https://doi.org/10.1016/S0140-6736(22)00582-7).

J6. **Fateme Rajabiyazdi**, Charles Perin, Lora Oehlberg, and Sheelagh Carpendale.(2021) Designing Patient Data Visualization:A Wicked Problem.*Computer Graphics & Applications*, 41(6):179-186, <https://doi.org/10.1109/MCG.2021.3112845>.

J5. **Fateme Rajabiyazdi**, Roshni Alam, Aditya Pal, Joel Montanez, Susan Law, Nicolò Pecorelli, Yusuke Watanabe, Luciana

D. Chiavegato, Massimo Falconi, Satoshi Hirano, Nancy E. Mayo, Lawrence Lee, Liane S. Feldman, Julio F. Fiore Jr (2021). What Does 'Recovery' Mean to Patients Undergoing Abdominal Surgery? An International Qualitative Study. *JAMA Surgery*, 156(8): 758–765, <https://doi.org/10.1001/jamasurg.2021.1557>.

J4. Charbel El-Kefraoui, **Fateme Rajabiyazdi**, Nicolò Pecorelli, Franco Carli, Lawrence Lee, Liane S Feldman, and Julio F Fiore. (2021). Prognostic Value of the Duke Activity Status Index (DASI) in Patients Undergoing Colorectal Surgery. *World Journal of Surgery*, 45, 3677–3685, <https://doi.org/10.1007/s00268-021-06256-4>.

J3. Maryam Mozafarinia, **Fateme Rajabiyazdi**, Marie-Josée Brouillette, Lesley K. Fellows, and Nancy E. Mayo. (2020). Development and Usability of a Feedback Tool, "My Personal Brain Health Dashboard", to Improve Setting of Self-Management Goals Among People Living with HIV in Canada, 30(11):3199-3211, *Quality of Life Research Journal*, <https://doi.org/10.1007/s11136-020-02555-w>.

J2. Maryam Mozafarinia, **Fateme Rajabiyazdi**, Marie-Josée Brouillette, Lesley Fellows, Bärbel Knäuper, and Nancy E. Mayo. (2020). Effectiveness of a Personalized Health Profile on Specificity of Self-Management Goals Among People Living with HIV in Canada: A Protocol for a Blinded Pragmatic Randomized Controlled Trial. *MNI Open Res*, 4:1, <https://doi.org/10.12688/mniopenres.12846.1>.

J1. Charbel El-Kefraoui, Ghadeer Olleik, Marc-Aurele Chay, Araz Kouyoumdjian, Philip Nguyen-Powanda, **Fateme Rajabiyazdi**, et al. (2020). Opioid Versus Opioid-free Analgesia after Surgical Discharge: Protocol for a Systematic Review and Meta-analysis. *BMJ Open*, 10:e035443. <https://doi.org/10.1136/bmjopen-2019-035443>.

Peer Reviewed Conference Proceedings (14)

Under-Review

C15. Mashrur Rashik, Shilpa Sweth, Nishtha Agrawal, Saiyyam Kochar, Kara Smith, **Fateme Rajabiyazdi**, Vidya Setlur, Narges Mahyar, and Ali Sarvghad. (2024). AI-Enabled Conversational Journaling for Advancing Parkinson's Disease Symptom Tracking *ACM CHI* (Under Review)

Accepted

C14. Shri Harini Ramesh*, **Fateme Rajabiyazdi**. (2024). Challenges and Opportunities of Teaching Data Visualization Together with Data Science. In *Proceedings of 2024 IEEE VIS Workshop on Visualization Education, Literacy, and Activities (EduVis)*, pp. 1-7. <https://doi.org/10.48550/arXiv.2409.05969> (To appear at the IEEE Xplore)

C13. Shri Harini Ramesh*, Alicia Ouskine*, Elahe Khorassani*, Mona Ebrahimipour, Hillel Finestone, Adrian D.C. Chan, and **Fateme Rajabiyazdi**. (2024). A Data Visualization Tool to Facilitate Patient-Healthcare Provider Communication During Inpatient Stroke Rehabilitation. In *Proceedings of the 50th Graphics Interface Conference (GI'24)*, pp. 1-12. <https://openreview.net/pdf?id=HSPRA1VW9I> (To appear at the ACM Digital Library)

🏆 Best Student Paper Award, selected 1 out of 37 accepted papers.

C12. **Fateme Rajabiyazdi**, Shri Harini Ramesh*, Beck Langstone*, Daniil Kulik*, and Justin Pontalba. (2024). TextVista: NLP-Enriched Time-Series Text Data Visualizations. In *Proceedings of the 50th Graphics Interface Conference (GI'24)*, pp. 1-14. <https://openreview.net/pdf?id=CX4uT5cauk> (To appear at the ACM Digital Library)

C11. Mahsa Sinaei Hamed*, Laura Reid*, Alice Olorunnife*, David Casciano*, and **Fateme Rajabiyazdi**. (2023). Designing and Developing a Mobile Application for Monitoring & Visualizing Blood Pressure Data. In *Proceedings of IEEE Sensor Applications Symposium (SAS)*, pp. 1-6, doi: [10.1109/SAS58821.2023.10253972](https://doi.org/10.1109/SAS58821.2023.10253972)

C10. Connor Haberl*, Graham Cook, Andrew Crean, Calum Redpath, **Fateme Rajabiyazdi**, and Robert DeKemp. (2023). A 4D Visualization Tool for Treatment Planning of Non-Invasive Radioablation in Patients with Ventricular Tachycardia. In *Proceedings of SPIE Medical Imaging*, pp. 206-213. <https://doi.org/10.1117/12.2654482>

C9. Irina Kondratova, Helene Fournier, and **Fateme Rajabiyazdi**. Aging in Place Virtual Care Technology from the User Experience Perspective. Human Aspects of IT for the Aged Population. Human-Computer Interaction International (2023). Lecture Notes in Computer Science, 14043, pp.131-144, Springer, <https://doi.org/10.1007/978-3-031-34917-1-10>

C8. **Fateme Rajabiyazdi**, Charles Perin, Lora Oehlberg, and Sheelagh Carpendale. (2020). Exploring the Design of Patient-Generated Data Visualizations. In *Proceedings of the 46th Graphics Interface Conference (GI'20)*. pp. 362-373, <https://doi.org/10.20380/GI2020.36>.

C7. **Fateme Rajabiyazdi**, Charles Perin, Jo Vermeulen, Haley MacLeod, Diane Gromala, and Sheelagh Carpendale. 2017. Differences that matter: in-clinic communication challenges. In *Proceedings of the 11th EAI International Conference on Pervasive Computing Technologies for Healthcare (PervasiveHealth '17)*. ACM, 251–260. <http://doi.acm.org/10.1145/3154862.3154885>.

C6. **Fateme Rajabiyazdi**, Charles Perin, Lora Oehlberg, and Sheelagh Carpendale. 2017. The challenges of individuality to technology approaches to personally collected health data. In *Proceedings of the 11th EAI International Conference on Pervasive*

Computing Technologies for Healthcare (PervasiveHealth '17). ACM, 448–451, <https://doi.org/10.1145/3154862.3154923>.

C5. **Fatemeh Rajabiyazdi**. 2016. Designing and Developing Technologies to Facilitate Clinician-Patient Communication. In *Proceedings of the 2016 ACM Companion on Interactive Surfaces and Spaces (ISS '16 Companion)*. ACM, 19–24, <https://doi.org/10.1145/3009939.3009943>.

C4. Alice Thudt, Jagoda Walny, Charles Perin, **Fateme Rajabiyazdi**, Lindsay MacDonald, Riane Vardeleon, Saul Greenberg, and Sheelagh Carpendale. (2016). Assessing the Readability of Stacked Graphs. In *Proceedings of the 42nd Graphics Interface Conference*, pp. 167–174, <https://dx.doi.org/10.20380/GI2016.21>.

C3. **Fateme Rajabiyazdi**, Jagoda Walny, Carrie Mah, John Brosz, and Sheelagh Carpendale. 2015. Understanding Researchers' Use of a Large, High-Resolution Display Across Disciplines. In *Proceedings of the 2015 International Conference on Interactive Tabletops & Surfaces (ITS '15)*. ACM, pp 107–116 <http://doi.acm.org/10.1145/2817721.2817735>.

C2. **Fateme Rajabiyazdi** and Tom Gedeon. (2012). Hand Grip Strength on a Large PDA: Holding While Reading Is Different from a Functional Task. In *Proceedings of the Sixth International Conference on Complex, Intelligent, and Software Intensive Systems*, pp. 475–480, <https://doi.org/10.1109/CISIS.2012.110>.

C1. **Fateme Rajabiyazdi** and Tom Gedeon. (2012). Comparing User Performance on an iPad to a 17-inch BackPad. In *Proceedings of the Sixth International Conference on Complex, Intelligent, and Software Intensive Systems*, pp. 469–474, <https://doi.org/10.1109/CISIS.2012.215>.

Book Chapters (1)

B1. Julio F Fiore Jr., **Fateme Rajabiyazdi**, and Liane S Feldman. (2022). Developing Patient-Centered Outcomes Metrics for Abdominal Surgery. *The SAGES Manual of Quality, Outcomes and Patient Safety*, 259–276, <https://doi.org/10.1007/978-3-030-94610-4-14>.

Juried Publications (5)

P5. Faisal Roshan Zaki*, Abhishek Ahuja*, and **Fateme Rajabiyazdi**. (2024). *IEEE VIS: Visualization & Visual Analytics Conference, Progressive Data Analysis and Visualization Workshop*, (St. Pete Beach, Florida, USA, October), pp. 1-4, <https://doi.org/10.48550/arXiv.2409.10537>.

P4. Mahsa Sinaei Hamed*, Pak Kwan, Matt Klich, Jillian Aurisano, and **Fateme Rajabiyazdi**. (2023). Expert Experiences Designing, Developing and Evaluating Data Visualizations on Large Displays. *IEEE VIS: Visualization & Visual Analytics Conference*, (Melbourne, Australia, October), pp. 1-2.

P3. Beck Langstone* and **Fateme Rajabiyazdi**. (2022). Co-Designing Unstructured Text Data Visualization Systems. *The 48th Graphics Interface Conference*, (Montreal, Canada, May), pp. 1-2, <https://doi.org/10.48550/arXiv.2407.02611>.

P2. Alicia Ouskine*, Adrian D.C. Chan, and **Fateme Rajabiyazdi**. (2022). Designing Interactive Data Visualizations Representing Recovery Progress for Patients After Stroke. *The 48th Graphics Interface Conference*, (Montreal, Canada, May), pp. 1-2, <https://doi.org/10.48550/arXiv.2402.11590>.

P1. Arsh Saleem*, Beck Langstone*, Alicia Ouskine*, and **Fateme Rajabiyazdi**. (2022). Design and Development of PainBit: Portable Device for Supporting Patients with Chronic Pain to Log their Pain. *The 48th Graphics Interface Conference*, (Montreal, Canada, May), pp. 1-2, <https://doi.org/10.48550/arXiv.2407.02697>.

Abstracts and Posters (24)

AP24. Julio Fiore Jr, Elahe Khorasani, **Fateme Rajabiyazdi**, Samin Shirzadi, Aylin Mansimova, Nancy Mayo, Lawrence Lee, Liane S. Feldman. (2024). Psychometric properties of a new patient-reported outcome measure to assess recovery after abdominal surgery: The Recovery After Abdominal Surgery (RAAS) questionnaire. (2024). *World Congress of Prehabilitation and Perioperative Medicine* (Abstract)

AP23. Shekinah McClymont, Meg Schwellnus, Maria Moro, Tracy Li, Atul Jaiswal, Melanie Chandler, **Fateme Rajabiyazdi**, Adrian Chan, Octavio Santos, Chantal Trudel, Neil W. Thomas. (2024). Designing an electronic version of a Memory Support System for individuals with Mild Cognitive Impairment: Challenges and Insights. *AGEWELL* (Poster)

AP22. Abagael Hudak, Laura Ault, Julien Lariviere-Chartier, Bruce Wallace, Frank Knoefel, Rafik Goubran, **Fateme Rajabiyazdi**, Neil W. Thomas. (2023). Developing A User Interface to Provide Sensor Information On The Daily Activities Of Care Partners Of People Living With Cognitive Impairment. *Canadian Conference on Dementia*. (Poster)

AP21. Olivia Monton, Allister Smith, **Fateme Rajabiyazdi**, and Marylise Boutros. (2023). Understanding Surgeon and Nurse Perspectives on the Use of Patient-Generated Data in the Management of Low Anterior Resection Syndrome. *American Society of Colon and Rectal Surgeons 2023 Annual Scientific Meeting*. (Poster)

- AP20. Jenny Moon, et al. **Fateme Rajabiyazdi**, and Marylise Boutros. (2023). Current Rectal Cancer Survivorship Care: Unmet Patient Needs and Fragmented Specialist and Family Physician Care. *American Society of Colon and Rectal Surgeons 2023 Annual Scientific Meeting*. (Abstract)
- AP19. Neil W. Thomas, Laura Ault, Julien Larivière-Chartier, Pdraig Greene*, Mihaela Petriu, **Fateme Rajabiyazdi**, Bruce Wallace, Frank Knoefel, Jeffrey Kaye, and Rafik Goubran. (2022). Smart Home Tech: an Interface to Provide Feedback to Caregivers of Persons Living with Cognitive Impairment. *AAIC Conference*. (Poster)
- AP18. Neil W. Thomas, Laura Ault, Julien Larivière-Chartier, Pdraig Greene*, Mihaela Petriu, **Fateme Rajabiyazdi**, et al. (2022). Home Sensor Platform Feedback Application: Building a Sensor Feedback System to Support Care Partners of those with Cognitive Impairment. *AGE-WELL Conference*. (Poster)
- AP17. Kevin Tran-Nguyen, Caroline Berger, Roxanne Bennett, Michelle Wall, Suzanne Morin, and **Fateme Rajabiyazdi**. (2022). A Mobile Application for Post-fracture Acute Pain Management in Older Adults: an Iterative Development Study. *American Society for Bone and Mineral Research*. (Poster)
- AP16. Khiran Arumugam, Katayoun Khorramak, Julio Flavio Fiore Junior, Amal Bessissow, **Fateme Rajabiyazdi**, and Suzanne Morin. (2022). The Role of The Community Pharmacists in The Management of Acute Pain in Adults: A Scoping Review. *American Society for Bone and Mineral Research*. (Poster)
- AP15. Maryam Mozafarinia, **Fateme Rajabiyazdi**, Marie-Josée Brouillette, Lesley Fellows, Barbel Knauper, and Nancy Mayo. (2021). Effectiveness of a Personalized Health Profile on Specificity of Self-Management Goals Among People Living with HIV in Canada: Findings From a Blinded Pragmatic Randomized Controlled Trial. *Quality of Life Research*, 30(1) Springer. (Poster)
- AP14. Olivia Monton, Allister Smith, Jeongyoon Moon, Marie Demian, Richard Garfinkle, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2021). An Online Educational App for Rectal Cancer Survivors with Low Anterior Resection Syndrome: A Mixed Methods Pilot Study. *Canadian Journal of Surgery*. 64, S130-S130. (Abstract)
- AP13. Vincent Brissette, Nasra Al Busaidi, Marie Demian, Carol-Ann Vasilevsky, Nancy Morin, **Fateme Rajabiyazdi**, Marylise Boutros. (2021). Sexuality And Rectal Cancer Treatment: A Qualitative Study Exploring Patients' Information Needs and Expectations on Sexual Dysfunction after Rectal Cancer Treatment. *Canadian Journal of Surgery*, 64, S128. (Abstract)
- AP12. Rachel Szwimer, Jeongyoon Moon, Marie Demian, A Pang, Nancy Morin, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2021). A Qualitative Study to Explore the Optimal Timing and Approach for the LARS Discussion. *Canadian Journal of Surgery*, 64, S137. (Abstract)
- AP11. Yossef Levin, Nasra Al Busaidi, Marie Demian, Nancy Morin, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2021). Financial and Occupational Impact of Low Anterior Resection Syndrome: A Qualitative Study. *American Society of Colon and Rectal Surgeons*. (Poster)
- AP10. Rachel Szwimer, Jeongyoon Moon, Marie Demian, Nancy Morin, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2021). Qualitative Study to Explore the Optimal Timing and Approach for the LARS discussion. *Canadian Surgery Forum*. (Poster)
- AP9. Vincent Brissette, Nasra Al Busaidi, Marie Demian, Nancy Morin, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2021). "Let's talk about sex?" A Qualitative Study Exploring Patients' Needs and Expectations for Information on Sexual Dysfunction After Rectal Cancer Surgery. (*Canadian Surgery Forum*. (Poster)
- AP8. Olivia Monton, Allister Smith, Jeongyoon Moon*, Marie Demian, Richard Garfinkle, Carol-Ann Vasilevsky, **Fateme Rajabiyazdi**, and Marylise Boutros. (2021). An Online Educational App for Rectal Cancer Survivors with Low Anterior Resection Syndrome: A Pilot Study. *Canadian Surgery Forum*. (Abstract)
- AP7. **Fateme Rajabiyazdi**, Roshni Alam, Haley Montgomery, Charbel El Kefraoui, Lawrence Lee, Nancy Mayo, Liane Feldman, and Julio Fiore Jr. (2020). Item Generation and Cognitive Interviewing for A Patient-Reported Outcome Measure of Recovery after Abdominal Surgery. *International Society for Quality of Life Research*, S84-S85, Springer. (Poster)
- AP6. Maryam Mozafarinia, **Fateme Rajabiyazdi**, Amanda Austin-Keiller, Marie-Josée Brouillette, Lesley Fellows, and Nancy E Mayo. (2020). Goal Quality, Education, and Cognition: Preliminary Analysis of Self-Management Goals Formulated by People Living with HIV. *International Society for Quality of Life Research*, S106-S106, Springer. (Poster)
- AP5. **Fateme Rajabiyazdi**, Aditya Pal, et al. (2020). What Does 'Recovery' Mean To Patients Undergoing Abdominal Surgery? An International Qualitative Study. *The Society of American Gastrointestinal and Endoscopic Surgeons*. (Poster)
- AP4. Charbel El-Kefraoui, Ghadeer Olleik, Marc-Aurele Chay, Araz Kouyoumdjian, Philip Nguyen-Powanda, **Fateme Rajabiyazdi**, et al. (2019). Opioid Versus Opioid-free Analgesia after Surgical Discharge: a Systematic Review and Meta-analysis. *Experimental Surgery Research Day*. (Poster)
- AP3. Seyedeh Maryam Mozafarinia, **Fateme Rajabiyazdi**, and Nancy Mayo. (2019). Measuring Quality of Health Outcome

Goals Using Text Mining Techniques. *International Society for Quality of Life Research*, S126, Springer. (Poster)

AP2. **Fateme Rajabiyazdi**, Charles Perin, Lora Oehlberg, and Sheelagh Carpendale. (2018). Personal Patient-Generated Data Visualizations for Diabetes Patients. (Poster)

AP1. **Fateme Rajabiyazdi**, Charles Perin, and Sheelagh Carpendale. (2015). WEST: Visualizing non-Emergency Surgery Waiting Times. IEEE Information Visualization Conference, <https://hal.inria.fr/hal-01587925/> (Poster)

Peer Reviewed Workshop Papers (7)

W7. **Fateme Rajabiyazdi**, Mandy Keck, Christina Stoiber, Jonathan C. Roberts, Hari Subramonyam, Lily Ge, Magdalena Boucher, Benjamin Bach. (2024). EduVis: 2nd IEEE VIS Workshop on Visualization Education, Literacy, and Activities. *IEEE Visualization Workshop*, (5 pages, Proposal), <https://iee-eduvis.github.io/IEEE-EduVis-Workshop-2024.pdf>

W6. Mandy Keck, Samuel Huron, Georgia Panagiotidou, Christina Stoiber, **Fateme Rajabiyazdi**, Charles Perin, Jonathan C. Roberts, Benjamin Bach. (2023). EduVis: Workshop on Visualization Education, Literacy, and Activities. *IEEE Visualization Workshop*, (4 pages, Proposal), <https://doi.org/10.48550/arXiv.2303.10708>.

W5. Jonathan C. Roberts, Benjamin Bach, Magdalena Boucher, Fanny Chevalier, Alexandra Diehl, Uta Hinrichs, Samuel Huron, Andy Kirk, Søren Knudsen, Isabel Meirelles, Rebecca Noonan, Laura Pelchmann, **Fateme Rajabiyazdi**, and Christina Stoiber. (2022). Reflections and Considerations on Running Creative Visualization Learning Activities. *4th IEEE Workshop on Visualization Guidelines in Research, Design, and Education at IEEE VIS*, (8 pages) <https://doi.org/10.48550/arXiv.2209.09807> (author ordered alphabetically).

W4. Jan Aerts, Wolfgang Aigner, Benjamin Bach, Fearn Bishop, Magdalena Boucher, Peter C.-H. Cheng, Alexandra Diehl, Jason Dykes, Sarah Hayes, Uta Hinrichs, Samuel Huron, Christoph Kinkeldey, Andy Kirk, Søren Knudsen, Doris Kosminsky, Tatiana Losev, Areti Manataki, Andrew Manches, Isabel Meirelles, Luiz Morais, Till Nagel, Rebecca Noonan, Georgia Panagiotidou, Laura Pelchmann, **Fateme Rajabiyazdi**, Christina Stoiber, Tatiana Landesberger, Jagoda Walny, and Wesley Willett. (2022). Me-ifestos for Visualization Empowerment in Teaching (and Learning?). *IEEE Alt.Vis*, (12 pages) <https://openreview.net/forum?id=FpkLUpGAgvv> (author ordered alphabetically).

W3. **Fateme Rajabiyazdi**, Charles Perin, Julie Babione, Joseph Tropiano, Maria Santana, Jaime Kaufman, William Ghali, Peter Sargious, and Sheelagh Carpendale. Involving Patients in their Care Plan: Patients' and Care providers' Perspectives. (2016). In *Proceedings of the CHI Workshop on Interactive Systems in Healthcare (WISH'16)*, (6 pages) <https://inria.hal.science/hal-01587993>

W2. Xin Tong, Diane Gromala, Lyn Bartram, **Fateme Rajabiyazdi**, and Sheelagh Carpendale. (2015). Evaluating the Effectiveness of Three Physical Activity Visualizations - How People Perform vs. Perceive. In *eProceedings of the IEEE Information Visualization Conference*.

W1. Tamara Flemisch, **Fateme Rajabiyazdi**, Mona Hosseinkhani, and Sheelagh Carpendale. (2015). NeckLan: Language as Jeweller. In *eProceedings of the IEEE Information Visualization Conference*, (4 pages).

Opinion/Editorials (1)

O1. Beck Langstone*, Alicia Ouskine*, Connor Haberl*, and **Fateme Rajabiyazdi**. Critical Reflections on Teaching Data Visualization Free Form. Medium. (2022). [Link](#)

Theses (2)

T2. **Fateme Rajabiyazdi**. Exploring the Design of Visualizations to Facilitate Patient-Provider Communication. *PhD Thesis, University of Calgary, 2018*. <http://dx.doi.org/10.11575/PRISM/34900>

T1. **Fateme Rajabiyazdi**. Design and Development of Interface for Different Tablet Sizes. *Master Thesis, School of Computer Science, Australian National University, 2012*. [Link](#)

Supervised Theses (4)

4. **Mariana Perez Rodriguez**, Health Data Visualizations for Interactive Tabletops. (2024) <https://doi.org/10.22215/etd/2024-16149>

3. **Alicia Ouskine**, Designing and Evaluating Interactive Data Visualizations Representing the Rehabilitation Progress of Patients Recovering from a Stroke within Inpatient Rehabilitation Facilities. (2023) <https://doi.org/10.22215/etd/2023-15696>

2. **Rebecca Langstone**, Design and Development of NLP-Enriched Time-Series Text Data Visualizations. (2023) <https://doi.org/10.22215/etd/2023-15769>

1. **Connor Harbel**, Design, Development, and Evaluation of a Software Tool for Therapy Planning of Non-invasive Cardiac Radioablation for Treatment of Ventricular Tachycardia. (2023) (embargo)

Invited Talks (20)

InvT20. IEEE Toronto Chapter <i>Title:</i> Patient-Clinician Collaboration	Aug 2024
InvT19. School of Education, Stanford University <i>Title:</i> Data Visualization Education and Literacy: Challenges and Opportunities	Jul 2024
InvT18. Data Day 10.0, Carleton University <i>Title:</i> Supporting Patient-Clinician Collaboration on Shared Surfaces	Mar 2024
InvT17. Biomedical Engineering Seminar Series, University of Ottawa <i>Title:</i> Empowering Patients in their Care using Data Visualization	Oct 2023
InvT16. Faculty of Health Sciences, University of Ottawa <i>Title:</i> Empowering Patients in their Care using Data Science	Apr 2023
InvT15. Ingenious Talks Lecture Series, Carleton University <i>Title:</i> Enhancing Patient Collaboration in Healthcare using Interactive Data Visualization	Nov 2022
InvT14. Policy Horizons Canada, Government of Canada <i>Title:</i> Innovative Text Data Visualization	Oct 2022
InvT13. Security Centre of Excellence Speakers Series, Privy Council Office (PCO) of Canada <i>Title:</i> AI, ML, NLP, Unstructured Text Data Visualization	Sep 2022
InvT12. Duke Kunshan University <i>Title:</i> How to design and develop individualized health data vis?	Aug 2022
InvT11. Visualization Empowerment: How to Teach/Learn Visualization, Dagstuhl Seminar, Germany <i>Title:</i> Teaching Data Visualization Free Form	Jun 2022
InvT10. Advancing New Canadian Women in Technology, uOttawa/Carleton University <i>Title:</i> Data Visualization for Health	Jan 2022
InvT9. Guest Speaker, SYSC4201 course, Carleton University <i>Title:</i> Information Visualization Systems to Support Patients with their Medical Care	Feb 2022
InvT8. Systems and Computer Engineering, Carleton University <i>Title:</i> Transition to Faculty Position	Dec 2021
InvT7. Seminar Series, Carleton University Institute for Data Science <i>Title:</i> Exploring the Design and Development of Patient Health Data Visualizations	Apr 2021
InvT6. Systems and Computer Engineering, Carleton University <i>Title:</i> Transition to Faculty Position	Feb 2021
InvT5. Engineering in Medicine and Biology Society, IEEE Ottawa Section <i>Title:</i> Information Visualization to Support Patients' Medical Care Management	Feb 2021
InvT4. Department of Computer Science, Toronto Metropolitan University <i>Title:</i> Designing interactive Data Visualization Systems to Enhance Patient Health	Jul 2020
InvT3. Department of Computer Science & Software Engineering, Concordia University <i>Title:</i> Designing and Developing Information Visualization Tools to Support Patients with their Medical Care	Apr 2020
InvT2. Minimally Invasive Surgery Research Day, McGill University Health Center <i>Title:</i> What does 'recovery' Mean to Patients Undergoing Abdominal Surgery?	Oct 2019
InvT1. Human Factors Interest Group, University of Toronto <i>Title:</i> Designing and Developing Tools to Enhance Patient-Physician Communication	Apr 2018

Media Appearances (3)

3. **CTV News Ottawa** Sep 2023
Invite: I was invited to talk about my research and my lab, HealthVisFutures on the CTV morning news segment
Title: Utilizing Technology to Close the Doctor-Patient Gap
Full Interview: <https://ottawa.ctvnews.ca/video?clipId=2775511>
2. **Renal & Urology News** Jun 2023
Title: Technological Advances Promise to Elevate Telemedicine to New Level by John Schieszer
Sub-title: Researchers are developing interactive health data visualization software for large multi-touch displays
Article: <https://www.renalandurologynews.com/features/technological-advances-promise-to-elevate-telemedicine-to-new-level/>
1. **Carleton's Challenge Campaign** Feb 2023
Title: Improving Doctor-Patient Communications
Full Story: <https://challenge.carleton.ca/health-data-visual-displays-rajabiyazdi/>

Established University, National and International Collaborations

Department-level Collaborations (3)

- Dr. Adrian Chan** Professor, Department of Systems and Computer Engineering 2021 - present
Outcomes: Co-applicant on MRCF and AgeTech Advance 2024 grants
Outcomes: Master student co-supervision 2021-2023
- Dr. James Green** Professor, Department of Systems and Computer Engineering 2021 - 2022
Outcomes: Co-applicant on CUELF grant 2021
- Dr. Sreeraman Rajan** Professor, Department of Systems and Computer Engineering 2021 - 2023
Outcomes: Co-applicant on MRCF grant 2022

Faculty-level Collaborations (3)

- Dr. Juan Garcia** Assistant Professor, School of Industrial Design 2021 - present
Outcomes: Co-applicant on MRCF grant 2022, Master student co-supervision 2022-2024
- Prof. Chantal Trudel** Professor, School of Industrial Design 2023 - present
Outcomes: Co-applicant on 2024 AgeTech Advance grant
- Dr. Omair Shafiq** Associate Professor, School of Information Technology 2021 - 2023
Outcomes: Co-applicant on MRCF grant 2022

Carleton University - University of Ottawa Collaborations (2)

- Dr. Robert DeKemp** Professor, Department of Medicine, University of Ottawa 2021 - present
Head Imaging Physicist The University of Ottawa Heart Institute
Adjunct Professor Department of Physics, Carleton University
Outcomes: Co-applicant on MRCF grant 2022
Outcomes: Master student co-supervision 2021-2023, PhD student co-supervision 2024-now
- Dr. Ran Klein** Assistant Professor, Department of Medicine, University of Ottawa 2021 - 2023
Adjunct Professor Department of Physics, Adjunct Professor Systems and Computer Engineering, Carleton University
Outcomes: Co-applicant on MRCF grant 2022

Canadian Industry Collaborations (2)

- Able Innovations, Toronto, Canada** 2023 - present
Intelligent Insights – Patient Transfers
Outcomes: Awarded 1 grant, supervised 1 MEng student project
- Novacene AI, Ottawa, Canada** 2021 - present
Marcelo Bursztein, Company's founder and CEO Novacene AI Corporation
Outcomes: Awarded 1 grant, supervised 1 MASc student, got 1 paper publication

Canadian Government and Healthcare Organization Collaborations (6)

University of Ottawa Heart Institute, Ottawa, Canada Dr. Jennifer Reed, Program Chair, Cardiac Rehabilitation Outcomes: Sharing patient data collected at the Heart Institute about patient's cardiac rehabilitation to find bottlenecks.	2024 - present
National Research Council Canada, Canada Dr. H�el�ene Fournier, Research Officer Human-Computer Interaction Department, NRC Outcomes: Co-awarded a grant, published a paper, supervised 2 HQP	2021 - present
Bruy�ere Research Institute, Ottawa, Canada Dr. Neil Thomas, Assistant Professor, Division of Neurology, Department of Medicine, University of Ottawa Outcomes: Co-published 2 posters, supervised 1 HQP, developing a user interface for patient home monitoring system	2021 - present
Winchester District Memorial Hospital, Winchester, Canada Dr. Mohamed Gazarin, Chief Research Officer Outcomes: Collaborating on a research project	2021 - 2022
Montreal General Hospital, Montreal, Canada Dr. Liane Feldman, Surgeon-in-chief, McGill University Health Centre Outcomes: Collaborating on a quality improvement project at Montreal General Hospital	2020 - present
Jewish General Hospital, Montreal, Canada Dr. Marylise Boutros, Program Director for the Colorectal Surgery Residency Program Outcomes: Co-awarded 2 grants, co-published 1 journal and 9 posters	2020 - present

International Research Collaborations (6)

Stanford University, United States Dr. Hari Subramonyam Assistant Professor, Stanford University Outcomes: Catalyst NSERC Alliance grant submission, co-organizing 1 workshop at the IEEE VIS'23/24	2024-present
University of Edinburgh, Scotland Dr. Benjamin Bach, Associate Professor, University of Edinburgh Outcomes: Co-published 1 journal paper, 2 workshop papers, co-organized 2 workshops at the IEEE VIS'23/24	2023-present
University of Applied Sciences Upper Austria, Austria Dr. Mandy Keck, Assistant Professor, University of Applied Sciences Upper Austria Outcomes: Co-published 1 journal paper, 2 workshop papers, co-organized 2 workshops at the IEEE VIS'23/24	2023-present
University of Massachusetts Amherst, United States Dr. Ali Sarvghad Assistant Professor, Manning College of Information & Computer Sciences Outcomes: Collaborating on a research project to develop an AI-assisted technology for older adults.	2022-present
University of Cincinnati, United States Dr. Jillian Aurisano Assistant Professor, University of Cincinnati Electrical Engineering & Computer Science Outcomes: Collaborating on a research project to develop technologies for large interactive displays.	2022-present
Oxford Brooks University, United Kingdom Centre for Movement, Occupational and Rehabilitation Science with Dr. Mansoubi and Dr. Shelly Coe. Outcomes: Collaborated on a research project to use text mining techniques in a systematic review study.	2019-2020

Teaching

Supervision and Mentoring HQP

I have been actively supervising HQP at various levels at Carleton University, from the Department of Systems and Computer Engineering, the School of Information Technology, and the Human-Computer Interaction and Data Science specialization.

I was hired at Carleton during the period of COVID-19, which posed challenges for recruiting students. Despite the pandemic, I successfully graduated 1 postdoctoral researcher and 4 master's of thesis students (3 as the primary supervisor), completed 2 MEng projects, and guided 7 undergraduate projects. Additionally, I involved 3 research assistants in my lab.

After I joined Carleton University, I continued co-supervising students from my postdoctoral studies at McGill University with my clinician collaborators; overall, I mentored 4 (McGill University Students) with Clinical Collaborator.

I currently have **3 PhD**, **2 Master's of thesis**, and **2 undergraduate** students under my supervision.

In addition to our course teaching, faculty in the Department of Systems and Computer Engineering are expected to supervise a number of 4th year project students. Since arriving at Carleton University, I have (co-)supervised 32 students (9 projects), with an additional 8 students (2 projects) this year. Details of these supervision activities are available below and in Table 2.

Level	In-Progress	Completed
Postdoctoral fellows	0	1
PhD students	3	0
Master's of thesis students	2	4
Master's of engineering students	0	2
Undergraduate students	2	7
McGill Students (with Clinical Collaborator)	0	4
Research assistants	0	3
Total	7	21
4th year undergraduate students (Capstone)	8 (2 projects)	32 (9 projects)

Table 2: Student Supervisions, Jan 2021 - Sep 2024.

Postdoctoral (1)

Dr. Elahe Khorasani

Postdoctoral Fellow, McGill University Health Center

Spring 2021 - Winter 2024

Primary Supervisor: Dr. Julio Fiore (McGill University)

My Role: Co-supervisor; assist in statistical method selection and data analysis; professional development mentorship

Current Position: Research Scientist at Bayer AG, a German multinational pharmaceutical and biotechnology company

🏆 Awards: Postdoctoral Scholarship, Fonds de Recherche du Québec – Santé (FRQS)

Project: Developing a Patient-Reported Outcome Measure to Assess Recovery after Abdominal Surgery

PhD Students (3)

Connor Harbel

PhD-SCE, Biomedical Engineering, Carleton University

Winter 2024 - present

My Role: Primary supervisor; assist in research method selection; study protocol writing; professional development mentorship

Co-Supervisor: Dr. Robert DeKemp

🏆 Awards: NSERC Postgraduate Scholarships – Doctoral

Status: Published 1 journal article with his co-supervisor, Finished 1 course, Completing first research project

Thesis: Evaluating Cardiac Image Registration Software

Shri Harini Ramesh

PhD-SCE, Biomedical Engineering, Carleton University

Fall 2023 - present

🏆 Awards: Bhargava Family Scholarship 2023, Allan Buchanan Scholarship 2023 (CarletonU Internal)

🏆 Nominations: Nominated by the Department for Vanier Canada Graduate Scholarship

Status: Published 3 long conference papers, submitted 1 journal paper; Finished 2 courses; PhD-Comp Exam planned Fall 2024

Thesis: Designing Data Visualization System for Tracking Cardiac Rehabilitation

Mahsa Sinaee Hamed PhD-SCE, Software Engineering, Carleton University Fall 2022 - present
🏆 Awards: Tom Skinner Award 2022 (CarletonU Internal)
Status: Published 1 journal paper, 1 Doctoral Symposium, 1 long conference paper, 1 juried conference paper;
Completed course requirements; Passed PhD-Comp Exam on June 2023; Planned Proposal defence for Nov 2024
Thesis: Developing Patient-Clinician Communication Technology for Older Adults with Chronic Conditions

Master's of Thesis Students (6)

Darwin Jull
MAsc, Biomedical Engineering, Carleton University Fall 2024 - present
🏆 Awards: Queen Elizabeth II Scholarship in Science and Technology 2024; Walter & Mary Chudobiak 2024 (CarletonU Internal)
Thesis: Identifying Health Disparity in Cardiac Rehabilitation using Large Language Models (LLMs)

Matteo Sotelo
Master of Information Technology, Carleton University Fall 2024 - present
Thesis: Designing Data Visualizations on Large Displays

Mariana Perez Rodriguez
MDes, Industrial Design, Carleton University Fall 2022 - Spring 2024
Primary Supervisor: Dr. Juan Garcia
My Role: Co-Supervisor; Thesis RA payment; thesis idea; study co-design and development; co-running the study; connection with healthcare providers; assist with data analysis; provided multiple rounds of edits and revisions to the thesis
Thesis: Health Data Visualizations for Interactive Tabletops

Beck Langstone
MAsc-HCI, Carleton University Fall 2021 - Summer 2023
Current position: AI Solutions Analyst at Novacene AI Corp.
Publication outcomes: Published 1 long conference paper and 1 juried conference paper
Thesis: Design and Development of NLP-Enriched Time-Series Text Data Visualization

Alicia Ouskine
MAsc-HCI, Carleton University Fall 2021 - Summer 2023
My Role: Primary supervisor; Half of RA payment; thesis idea; study design and development; running the study; data analysis; provided multiple rounds of edits and revisions to the thesis and manuscript publication
Co-Supervisor: Dr. Adrian Chan
Current position: UX Advisor at the National Capital Commission
Publication outcomes: Published 1 long conference paper and 1 juried conference paper
Thesis: Designing and Evaluating Interactive Data Visualizations Representing the Rehabilitation Progress of Patients Recovering from a Stroke within Inpatient Rehabilitation Facilities

Connor Harbel
MAsc, Biomedical Engineering, Carleton University Fall 2021 - Summer 2023
My Role: Primary supervisor; assisted in research method selection; study protocol writing; professional development mentorship; provided multiple rounds of edits and revisions to the thesis
Co-Supervisor: Dr. Robert DeKemp
🏆 Awards: Allan Buchanan Scholarship 2021 (CarletonU Internal)
Current position: PhD student at Carleton University
Publication outcomes: Published 1 long conference paper
Thesis: Design, Development, and Evaluation of a Software Tool for Therapy Planning of Non-invasive Cardiac Radioablation for Treatment of Ventricular Tachycardia

Master of Engineering Students (2)

Faisal Zaki Roshan
MEng Project Supervision, Electrical and Computer Engineering, Carleton University Winter 2024
Publication outcomes: Published 1 juried conference paper
Project: Visualizing Hospital Bed Sensors for Patient Transfer Data

Abhishek Ahuja
MEng Project Supervision, Electrical and Computer Engineering, Carleton University Winter 2023
Current position: System Analyst and Data Integration System Analyst and Data Integration at Brookfield Renewable
Publication outcomes: Published 1 juried conference paper
Project: Visualizing Quality Indicators in Surgical Units in Hospitals across Quebec

Undergraduate Students (9)

Mia Cornell

Bachelor of Electrical Engineering
Research Assistant, Carleton University
Developing Data Visualization to Demonstrate (Bruyere) Hospital Bed Transfer Sensors
Fall 2024 - present

Esosa Ohangbon

Bachelor Mechanical Engineering
I-CUREUS, Carleton University (Summer); Research Assistant (Fall)
Developing Visualizations on Large Displays
Summer 2024 - present

Darwin Jull

Bachelor Biomedical Computing
I-CUREUS, Carleton University
An Interview Study with Cardiac Rehabilitation Team
Fall 2023 - Winter 2024

Ali Shajari

Bachelor Art
SaPP, Carleton University
Developing Datathons for Data Science Course
Fall 2023

Erin Lui-Hing

Bachelor Biomedical Computing
I-CUREUS, Carleton University
Developing and Evaluating a Pain Tracker
Fall 2022

Ala'A Alsatari

Bachelor of Neuroscience
I-CUREUS, Carleton University
Usability and Practical Utility Factors of VCR for Cardiac Rehabilitation
Fall 2022

Padraig Greene

Bachelor Biomedical Computing
USRA, Queen's University
Designing an Interactive Visualization System for Dementia
Summer 2022

Arsh Saleem

Bachelor of Engineering Biomedical and Electrical
Co-op Program, I-CUREUS, Carleton University
Designing and Developing an Accessible Pain Tracker
Summer 2021 - Winter 2022

Rahel Gunaratne

Bachelor Software Engineering
I-CUREUS, Undergraduate Student Researcher, Carleton University
Designing an Interactive Visualization System to Enhance Student Awareness on EDI
Summer 2021 - Winter 2022

McGill University Students (with Clinical Collaborator) (4)

Kevin Tran

Research Associate, McGill University
Co-Supervisor: Dr. Suzanne Morin
Project: Developing a Mobile App to Support Patients Manage Pain after a Bone Fracture
2021-2022

Caroline Berger

Research Associate, McGill University
Co-Supervisor: Dr. Suzanne Morin
Project: Designing a Mobile App to Support Patients Manage Pain after a Bone Fracture
2020-2021

Olivia Monton

Medical Resident Student, McGill University
Supervisor: Dr. Marylise Boutros
Project: eLARS Online Educational App Pilot Study
2020-2022

Vincent Brissette

Medical Student, McGill University
Supervisor: Dr. Marylise Boutros
Project: Sexual Dysfunction in Patients with LARS: A Qualitative Study
2020-2022

Research Assistants (3)

Daniil Kulik

Master of Computer Science, Carleton University
Developing Text Data Visualization Systems

Summer 2022 - Summer 2024

Abhishek Mayurbhai Patel

MEng, Electrical and Computer Engineering, Carleton University
Developing a Web Platform for Collecting Large Datasets

Fall 2022 - Summer 2023

Sanhita Paluskar

MEng, Electrical and Computer Engineering, Carleton University
Developing HealthVis Research Center Website

Summer 2023

Fourth-Year Undergraduate Engineering Projects (40 students, 11 projects)

Erin Lui-Hing, Logain Sayed Ahmed, Anushka Bora, Nadeen Mortaja

Role: Supervisor, Title: Designing Rehabilitation Games for Children

Fall 2024 - present

Hetarthi Soni, Michael Churchill, Nicholas Nemece, Peter Willis

Role: Co-supervisor, Title: Smart Agent with Adaptive Learning and Multi-Directional Sensing

Fall 2024 - present

Darwin Jull, Nikita Yovchev, Maven Uyttewaal

Role: Supervisor, Title: Application for Monitoring SID for parents

Fall 2023 - Winter 2024

Amir Laghai, Duncan MacLeod, William Sloan

Role: Co-supervisor, Title: Audio Spatialization and Direction Finding

Fall 2023 - Winter 2024

Anthony Massaad, Christopher Semaan, Cory Helm, Nicolas Tanouchev

Role: Co-supervisor, Title: Emergency GPS Tracker

Fall 2023 - Winter 2024

Khusmeet Ahluwalia, Momin Mushtaha, Gineydi Orozco, Priya Tailor

Role: Supervisor, Title: Connecting Health Data from iPad to a Large Display

Fall 2022 - Winter 2023

Nafe Ahmed, Aayush Mallya, Ishanov Sahni, Monishkumar Sivakumar

Role: Supervisor, Title: Building a Blood Pressure Monitor

Fall 2022 - Winter 2023

Sherif El Halafawy, Phillippe Forster, Malak Saifelnasr, Freddy Sourial

Role: Co-supervisor, Title: Low Power Emergency Tracker for People Living with Dementia

Fall 2022 - Winter 2023

Menna AbdelHadi, Hanan Alshatti, Eline-Elorm Nuviadenu, Hiu Sum Jaime Yue

Role: Co-supervisor, Title: Activity of Daily Living Assessment-Stove/Oven use

Fall 2022 - Winter 2023

Laura Reid, David Casciano, Alice Olorunnife

Role: Supervisor, Title: Visualizing Blood Pressure Data

Fall 2021- Winter 2022

Jack Hendry, Justice Ayela, Haoyu Xu

Role: Supervisor, Title: Connecting Health Data from iPad to a Large Display

Fall 2021 - Winter 2022

Committee Advisorships (2)

Fatemeh Ahmadi Harchegani

PhD, Data Science, Analytics, and Artificial Intelligence, Carleton University
Modeling of Biomarker and Outcomes Data in Duchenne Muscular Dystrophy

2024 - present

Mohamed Gazarin

PhD, Department of Health Sciences, Carleton University
Development of an Automated Vision-based Incident Analysis System for Indoor Falls

2021 - present

Curriculum Developments (4)

New Undergrad Course Development: “Introduction to Data Science and Data Visualization, SYSC4906B” 2024

I planned and proposed a new elective course for students in their last year of the Software Engineering and Computer System Engineering programs, SYSC4906B (Introduction to Data Science and Data Visualization).

In this course, I teach materials that align with students' programs and today's technological advancements in the field of data science and data visualization. I incorporated teaching skills that are relevant today and for the future, such as programming with Python, Google Collab, Microsoft PowerBI, and Tableau software.

Integrated Career Development Skills in Software Eng, ECOR1055B 2024

In a 2023 survey of software engineering students, feedback highlighted a lack of access to co-op program resources. In response, I coordinated with the co-op office and Career Services to deliver a joint workshop as part of the ECOR1055B (Introduction to Engineering Discipline I) course, focusing on available resources and career development.

Course Updates: “Ethics, Research Methods and Standards for Biomedical Engineering“, SYSC4201 2023-2024

I teach SYSC4201 to biomedical engineering students. I have been teaching this course since the Winter of 2022; I actively update the tutorial and discussion sessions and include up-to-date topics, such as ethical issues of using Large Language Models. Additionally, recently some student feedback indicated that the prerequisites create obstacles for their pathway. In collaboration with Dr. Adrian Chan, who was previously teaching this course, we proposed to remove “ELEC3605 or SYSC3203” as prerequisites for SYSC4201 and add “ECOR2050” as a prerequisite.

New Grad Course Development: “Advanced Data Visualization”, SYSC5807x 2022

I developed a new graduate interdisciplinary and cross-departmental course SYSC5807X/BIOM5403 “Advanced Data Visualization” offered to students from different programs. This course is cross-listed for Biomedical Engineering and Systems and Computer Engineering at Carleton University and the University of Ottawa; additionally, this course is listed as an approved elective for Master of Human-Computer Interaction and Data Science, Analytics, and Artificial Intelligence graduate students at Carleton University. In this course, I teach data literacy, visualization literacy, and the fundamentals of designing and developing interactive data visualizations, as in this new age of data and technology, data visualization literacy is an essential skill.

Courses Taught at Carleton University (7)

My teaching responsibilities at Carleton University included 7 courses, amongst those 3 different undergraduate courses offered to engineering students in my department, ranging from the second year to the fourth year and 1 graduate course for Master and PhD level students. I developed 1 new undergraduate course and 1 new graduate course, both indicated with a ★.

My student evaluation score is an average of 4.35/5, consistently above the faculty average; my personal overall average is above the subjects and the faculty averages (See Table 3).

My teaching philosophies and details of my innovations and strategies are available in my Teaching Dossier.

Code	Course Name	Semester	Resp./ Enrl.	TAs	Personal Mean	Subject Mean	FED Mean
SYSC 4906B	★ Introduction to Data Science & Data Vis	Winter'24	19/26	1	4.39	4.06	4.02
SYSC 4201	Ethics, Research Methods, & Standards for Biomed	Winter'24	54/73	2	4.12	4.06	4.02
SYSC 5807/ BIOM 5403	★Advanced Data Visualization	Fall'23	16/22	0	4.58	4.33	4.02
SYSC 4201	Ethics, Research Methods, & Standards for Biomed	Winter'23	31/42	1	4.51	3.98	4.04
SYSC 5807/ BIOM 5403	★Advanced Data Visualization	Fall'22	15/21	0	4.76	4.30	4.04
BIOM 5403	★Advanced Data Visualization	Winter'22	6/11	0	4.13	4.31	3.84
SYSC 2006	Foundations of Imperative Programming	Winter'21	20/118	3	3.98	3.96	3.92
Overall Mean					4.35	4.14	3.99

Table 3: Teaching responsibilities at Carleton (Winter 2021-Winter 2024); courses with a star ★ are developed by me. In 2022-2023, I had one course relief with the success of my MRCF2022 grant.

Service & Professional Development

Thesis Examination Committees (35)

I served on 35 thesis evaluation boards. Information about the students' names and programs, institutions, and supervisors for the 15 theses where I acted as an examiner, can be found here (Table 4), and information for the 20 theses where I acted as a chair, can be found here (Table 5).

Student Name	Program	Institution	Supervisor	Date
Pavaris Thongthanomkul	Master of HCI	CarletonU	Lesley Istead	Apr'24
Michael Aziz	MASc Electrical & Computer Eng	CarletonU	Yvan Labiche	Apr'24
Eman El-Fayomi	PhD Proposal Information Technology	CarletonU	Audrey Girouard	Dec'23
Ebubechukwu Ubochi	Master Information Technology	CarletonU	David Thue	Sep'23
Daniela Napoli	PhD Proposal, Computer Science	CarletonU	Sonia Chiasson	Aug'23
Devvrat Bhardwaj	MASc Electrical and Computer Eng	UOttawa	Pascal Fallavollita	May'23
Kelly Ko	Master of HCI	CarletonU	Vicky McArthur	May'23
Bahareh Chimehi	MASc Electrical & Computer Eng	CarletonU	Rafik Goubran	May'23
Cathy Zhang	Master Information Technology	CarletonU	Omair Shafiq	Dec'22
Maryam Barani	PhD Proposal, Systems & Computer Eng	CarletonU	Yvan Labiche	May'22
Maryam Sadeghian	Master of HCI	CarletonU	Vicky McArthur	Apr'22
Leen Yassin	MASc Electrical and Computer Eng	CarletonU	Rafik Goubran	May'22
Daniel D. Lowcay	MASc Civil Eng	CarletonU	Burak Gunay	Sep'21
Elaheh Samimi	Master Information Technology	CarletonU	Robert Teather	Sep'21
Ramy Maarouf	Master Information Technology	CarletonU	Ashraf Matrawy	Aug'21
Total: 15 students	7 Programs	2 Institutions	12 Supervisors	21-24

Table 4: Examiner Committee Membership, Jan 2021 - Sep 2024.

Student Name	Program	Institution	Supervisor	Date
Mitali Patel	MASc Electrical and Computer Eng	CarletonU	Gabriel Wainer	Sep'24
Shaghayegh Kalantari	Master of HCI, Industrial Design	CarletonU	Chantal Trudel	Sep'24
Stojanche Gjorcheski	PhD Proposal, Electrical & Computer Eng	CarletonU	Jason Jaskolka	Aug'24
Fatemeh Mirshafiee	PhD Comp Exam, Electrical & Computer Eng	CarletonU	Nafiseh Kahani	Jun'24
Anas Tiane	PhD Defence, Electrical Eng	CarletonU	Hicham Chaoui	Dec'23
Aroosha Fareghdeli	PhD Comp Exam, Biomedical Eng	CarletonU	Leila Guidolin	Jul'23
Nadia Abzan	PhD Comp Exam, Biomedical Eng	CarletonU	Leila Guidolin	Jul'23
Youcef Kardjadja	PhD Comp Exam, Electrical & Computer Eng	CarletonU	Mohamed IbnKahla	Jun'23
Zein Hajj-Ali	MASc Biomedical Eng	CarletonU	James Green	Jan'23
Jaser El-Habrouk	MASc Biomedical Eng	CarletonU	James Green	Jan'23
Sereda Bohdana	MASc Electrical & Computer Eng	CarletonU	Jason Jaskolka	Dec'22
Román Rodríguez	PhD Proposal, Electrical & Computer Eng	CarletonU	Gabriel Wainer	Nov'22
Diego Politis	MASc Biomedical Eng	CarletonU	Adrian Chan	Sep'22
Emma Farago	PhD Proposal, Biomedical Eng	CarletonU	Adrian Chan	Jun'22
Nadia Farrag	PhD Proposal, Biomedical Eng	CarletonU	Yuu Ono	Nov'21
Joe Samuel	MASc Electrical & Computer Eng	CarletonU	Jason Jaskolka	Sep'21
Natasha Kunchur	PhD Proposal, Biomedical Eng	CarletonU	Leila Guidolin	Aug'21
Yasmina Dosso	PhD Proposal, Biomedical Eng	CarletonU	James Green	Aug'21
Andy Huang	MASc Electrical and Computer Eng	CarletonU	Sreeraman Rajan	May'21
Satyake Bakshi	MASc Biomedical Eng	CarletonU	Sreeraman Rajan	Apr'21
Total: 20 students	9 Programs	1 Institution	11 Supervisors	21-24

Table 5: Committee Chair, Jan 2021 - Sep 2024.

University-Level Services (2)

Panelist , New Faculty Orientation for Teaching and Learning - Carleton University	2024
Member , Healthy Workplace Focus Group - Carleton University	2022

Faculty-Level Services (4)

RTI Grant Writing Panel for FED , Carleton University - Faculty of Engineering and Design	2024
EDI Council Member , Carleton University - Faculty of Engineering and Design	2023-present
EDI Council Member , Developing FED EDI Action Plan, Carleton University - Faculty of Engineering and Design	2021-2023
Representative, Spring Convocation , Carleton University - Faculty of Engineering and Design	2022-2024

Department-Level Services (7)

Department Library Representative , Carleton University - SCE	2024-present
Volunteer Mentorship Sessions for Undergrad Women , Carleton University - SCE	Summer 2024
Department Representative , Recruitment Event, Carleton University - SCE	2024
Department MakerSpace Lead , Carleton University - SCE	2023-2024
Department Representative , Recruitment & Demo Day, Carleton University - SCE	2023
Student Awards Committee , Carleton University - SCE	2022-2023
Display Wall Coordinator Carleton University - SCE	2021-2023

Executive Roles (3)

Secretary , Canadian Human-Computer Communications Society Executive Committee	2024-present
Publication Chair , IEEE Ottawa Section	2021-present
Strategy Planning Member , Canadian Human-Computer Communications Society	2020-2022

Conference Program Committees and Chairing (24)

Conference Organization Committee (10)

Workshop Chair Lead, IEEE VIS EduVis	2024
Tutorial Chair, IEEE SAS	2023
Workshop Co-organizer, IEEE VIS EduVis	2023
Poster Chair, Graphics Interface Conference	2022
Publicity Chair, ACM Interactive Surfaces and Spaces (ISS) Conference	2022
Poster Chair, ACM Interactive Surfaces and Spaces (ISS) Conference	2021
Poster Chair, McGill University Health Center Injury, Repair, Recovery Annual Research Day	2020
Video Preview Chair, ACM Interactive Surfaces and Spaces (ISS) Conference	2019
Poster Award Committee, McGill University Experimental Surgery Research Day	2019
Mobile App Chair, ACM Interactive Surfaces and Spaces (ISS) Conference	2016

Conference Session Chair (3)

Session Chair, Graphics Interface Conference	2024
Session Chair, IEEE VIS EduVis Workshop	2023
Session Chair, Graphics Interface Conference	2023

Program Committee (11)

International Program Committee, IEEE EuroVis	2024
Program Committee, ACM CHI Late-Breaking Work (LBW)	2022, 2023
Program Committee, ACM Intelligent User Interfaces (IUI) Conference Posters and Papers	2015, 2019, 2020, 2021
Program Committee, IEEE Information Visualization (InfoVis) Short Papers	2020, 2021, 2023, 2024

Grant Reviews (2)

Mitacs Accelerate , Canada, 1 application	2024
John R. Evans Leaders Fund, Canada Foundation for Innovation (CFI) , 1 application	2022

Conference/Journal Paper Reviews (51 Reviews)

ACM ISS 2024, IEEE EduVis 2023-2024, IEEE EuroVis 2023-2024, IEEE VIS 2021-2024, ACM CHI 2021-2024, GI 2021-2023, ACM UIST 2021 and 2024, AMIA 2020-2021, ACM TEI 2021, ACM IUI 2021-2022

Community Outreaches (5)

Student Competition Judge , Advancing New Canadian Women in Technology	Feb 2022
Podcast guest , Carleton University Women in Science and Engineering Words Podcast	Nov 2021
Speaker , Carleton University SCETalk: What is Data Visualization	Oct 2021
Speaker , Carleton University, Passionate Minds Unit 101 Summer Webinar	Aug 2021
Panelist , Carleton University Women in Science and Engineering National Engineering Month Event	Mar 2021

Professional Developments (5)

Building Academic CV for Promotion and Tenure , Faculty of Engineering and Design, Carleton University	Jun 2024
Certificate of Course Design Fundamentals , Teaching and Learning Services, Carleton University	Aug 2023
Kinàmàgawin Indigenous Learning Certificate , Indigenous Support and Community Engagement	Aug 2022
Certificate of University Teaching , Teaching and Learning Services, Carleton University	Apr 2022
Research Mentorship Series , Department of Systems and Computer Engineering, Carleton University	Winter 2021

Professional Licenses (1)

Fully Licensed and Registered , Professional Engineers Ontario (PEO)	Jul 2023-present
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Professional Memberships (3)

Member , Association for Computing Machinery (ACM)	2024-present
Member , Canadian Medical and Biological Engineering Society (CMBES)	2022-present
Member , Institute of Electrical and Electronics Engineers (IEEE)	2021-present