Stan Nowak

PhD Candidate   snowak@sfu.ca

School of Interactive Arts and Technology   778-989-1537

Simon Fraser University

Education

PhD   2017 – (expected) 2023

Simon Fraser University *Surrey, BC*

Senior Supervisor: Dr. Lyn Bartram

Supervisory committee: Dr. Pascal Haegeli and Dr. Wolfgang Stuerzlinger

Bachelor of Arts in Cognitive Systems: Cognition and The Brain   2009 –2014

University of British Columbia *Vancouver, BC*

Publications

Archival Conference Proceedings (refereed)

C1. Nowak, S., Bartram, L. (2022, May). "I'm Not Sure: Designing for Ambiguity in Visual Analytics". In *2022 Graphics Interface 2022.*

C2. Nowak, S., Bartram, L., & Haegeli, P. (2020, October). Designing for Ambiguity: Visual Analytics in Avalanche Forecasting. In *2020 IEEE Visualization Conference,* Salt Lake City, USA

C3. Nowak, S., Bartram, L., & Schiphorst, T. (2018, October). A Micro-Phenomenological Lens for Evaluating Narrative Visualization. In *2018 IEEE Evaluation and Beyond-Methodological Approaches for Visualization (BELIV)* (pp. 11-18). IEEE.

C4. Horton, S., Nowak, S., & Haegeli, P. (2018) Exploring regional snowpack patterns with gridded models. *International Snow Science Workshop Proceedings 2018*, Innsbruck, Austria

Journal

J1. Nowak, S., Rosin, M., Stuerzlinger, W., Bartram, L. (2021). Integrating Clinical Knowledge in the Analysis of Natural Histories of Oral Cancer through Visual Analytics. *Frontiers in Oral Health*

J2. Horton, S., Nowak, S., & Haegeli, P. (2019). Enhancing the operational value of snowpack models with visualization design principles. *Natural Hazards and Earth System Sciences.*

J3. Fuhrman, R. A., Nowak, S., & Vatikiotis-Bateson, E. (2016). Evaluating how fine-grained changes in the spatial and temporal properties of audiovisual speech influence the perception of linguistic meter. *The Journal of the Acoustical Society of America*, *139*(4), 2046-2046.

Short Papers

R1. Nowak, S., Bartram, L. (2022). "Give Me the Data: Visual Analytics Needs to Go Beyond Visualization". ASCR Workshop on Visualization for Scientific Discovery, Decision-Making, & Communication.

Projects & Systems

AvIDdx Visualization System – *Software System*   May 2020
Operational avalanche forecasting visualization system developed in collaboration with
and for Avalanche Canada. In operational use by Avalanche Canada.

Awards

Helmut & Hugo Eppich Family Graduate Scholarship   Spring 2022
Amount: $1200
Competitive scholarship to support intelligent systems science research

FCAT Graduate Fellowship   Summer 2021
Amount: $3500
Graduate fellowship for the Faculty of Arts and Technology

Presidents PhD Scholarship   Spring 2021
Amount: $7500
Competitive scholarship for students demonstrating scholarly output and leadership relative to peers

Andrew Wade Memorial Scholarship in Visual Analytics   Fall 2020
Amount: $7500
Competitive scholarship for graduate students specializing in visual analytics

Van Pykstra Graduate Scholarship   Spring 2020
Amount: $3700
Competitive scholarship to support intelligent systems science research

Graduate Fellowship   Spring 2020
Amount: $6500

SFU Big Data Graduate Scholarships   Fall 2019
Amount: $6500
Competitive scholarship to support big data research leaders

Graduate Fellowship   Spring 2019
Amount: $3250

FCAT Graduate Fellowship   Spring 2019
Amount: $3250
Graduate fellowship for the Faculty of Arts and Technology

Travel & Minor Research Award   Fall 2018

Amount: $1000

Support for Travel and Research at *IEEE VIS 2018*

Andrew Wade Memorial Scholarship in Visual Analytics   Fall 2018

Amount: $6800

Competitive scholarship for graduate students specializing in visual analytics

Talks

Interactive Visualizations for Avalanche Hazard Assessment   May 2021

Canadian Avalanche Association Spring Meeting, *Virtual Conference*

Designing for Ambiguity: Visual Analytics in Avalanche Forecasting   October 2020

2020 IEEE Visualization Conference, *Salt Lake City*

Visual Analytics in Avalanche Forecasting   March 2020

Western Innovation Forum, *Burnaby*

Visualization Design, Analysis, and Visual Thinking   March 2020

SFU SciProg Research Commons Workshop, *Burnaby*

Designing Visualization Tools for Avalanche Forecasters   May 2019

Canadian Avalanche Association Spring Meeting, *Penticton*

Principles of Data Visualization and Interpretation   March 2019

SFU SciProg Research Commons Workshop, *Burnaby*

Data Visualization: A Brief Introduction   March 2019

UBC Cognitive Systems Guest Lecture, *Vancouver*

A Micro-Phenomenological Lens for Evaluating Narrative Visualizations October 2018

BELIV Workshop IEEE Infovis, *Berlin*

Professional and Research Experience

AutoDesk – Research Intern   2022

Mentorship: Justin Matejka, Bon Aseniero, Tovi Grossman, Lyn Bartram

HCI & Viz group exploring user interfaces at the intersection of visual analytics and architectural CAD.

Vancouver Institute for Visual Analytics – Research Assistant
2017 - Present

Supervisor: Dr. Lyn Bartram

Part of SFU's Big Data Initiative. Visual analytics & information visualization consulting support for internal and external clients including but not limited to Avalanche Canada, BC Cancer Research Centre, SFU internal departments, and graduate students.

SFU Avalanche Research Program - Research Assistant
2019 - 2020

Supervision: Dr. Pascal Haegeli & Dr. Lyn Bartram

Conducting human-centered research to understand the work of public avalanche forecasters in order to inform the design of visual analytics tools. Developing visualization tools to aid exploratory analysis of physical snowpack models.

Visual Analytics Consulting – Self-Employed
2016 - 2017

Analytics and visualization support for clients in business intelligence, data journalism, and retail supply-chain management and distribution.

Vancouver Institute for Visual Analytics – Mentor
2015 - 2017

Visual analytics training for academics and professionals. Analytics consulting for industry clients.

BuckMeUp.com – Cofounder
2014 - 2017

Design, front-end development and business development of freelance marketplace website.

Communication Dynamics Laboratory – Research Assistant
2014 - 2016

Supervisor: Dr. Eric Vatikiotis-Bateson

Developing software for experiments investigating audio-visual illusions.

Visual Cognition Laboratory – Research Assistant
2014

Supervisor: Dr. Ron Rensink

Developing software for experiments investigating the effects of stress on visual cognition.

Visual Cognition Laboratory – Volunteer
2013

Supervision: Dr. Graham Healy & Dr. Ron Rensink

Designed and conducted experimental research investigating the effects of neurofeedback-training on video game performance.

Communication Dynamics Laboratory – Directed Studies Student
2012

Supervision: Dr. Eric Vatikiotis-Bateson & Dr. Osman Ipsiroglu

Research investigating the use of non-invasive crude motion-detection from 2D video used in monitoring and treatment of children with sleep-disorders.

Teaching

Visual Analytics Two-Day Course – Teaching Assistant
2019

Instructor: Dr. Lyn Bartram

2-day overview of visual analytics for corporate clients. Aided development and delivery.

IAT355 Introduction to Visual Analytics – Teaching Assistant   2019

Instructor: Dr. Lyn Bartram

Simon Fraser University – School of Interactive Arts and Technology

Designed, delivered, and graded tutorials and assignments.

Visual Analytics Half-Day Course – Teaching Assistant   2018 - 2019

Instructor: Dr. Lyn Bartram

½ day overview of visual analytics for BC Government and climate researchers. Aided development and delivery.

Visual Analytics Half-Day course – Instructor   2017

Basic ½ day introduction to visual analytics for engineering students. Developed and delivered.

Management Information Systems – Teaching Assistant   Fall 2016

Instructor: Alym Amlani

University of British Columbia – Sauder School of Business

Developed and graded class exercises.

Andrew Wade Student Workshops – Instructor   2015 - 2017

Vancouver Institute for Visual Analytics – UBC & SFU

Developed and delivered 12-week introductory visual analytics course.

APPP505 Analytics and interp. for Applied Sciences – Teaching Assistant   2016 - 2017

Instructor: Dr. Iain Begg

Developed and delivered lab portion for the course.

SFU Continuing Studies VA Certificate   2016

Aided the development of two courses (VISU110 and VISU410) that have yet to be taught.