# **Stan** Nowak

PhD Candidate
School of Interactive Arts and Technology
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## Education

### PhD
2017 – (expected) 2022

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*

## 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

# Publications

## Archival Conference Proceedings (refereed)

C1. 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

C2. 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.

C3. 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.

## In Submission

R1. Nowak, S., Bartram, L. (2022). "I'm Not Sure: Designing for Ambiguity in Visual Analytics". In *2022 Graphics Interface 2022.*

# 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.

# 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

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

Mentoring: 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

Supervisor: 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.