Bon Adriel Aseniero, PhD

bon.aseniero@autodesk.com

I am a multi-disciplinary information designer, computer scientist, and visual artist, based in Toronto, Ontario, Canada. I work at Autodesk as a Senior Research Scientist. My research interests lie in the intersection of Information Visualization and Human–Computer Interaction, particularly in exploring how **delightful visualizations** can engage and support people in exploring data.

I obtained my PhD in Computer Science from the University of Calgary, under the supervision of Dr. Sheelagh Carpendale and Dr. Tony Tang. My work has received recognition in the form of scholarship awards including the National Sciences and Engineering Research Council of Canada Doctoral Scholarship (NSERC PGS) and the Alberta Innovates Technology Futures Award (AITF), and I have previously collaborated with institutions such as the Canada Energy Regulator (CER), World Health Organization (WHO), and Nokia-Bell Labs.

In my spare time, I enjoy photography (film and digital), drawing and illustration, painting, online gaming, and exploring new places.

research interests
Information Visualization, Visual Arts, Design, Personal Informatics,
Human-Computer Interaction

Education

2015-2020	**PhD Computer Science** University of Calgary, Alberta, Canada Information Visualization, Human-Computer Interaction, Personal Visualizations Supervisors: Dr. Sheelagh Carpendale, Dr. Tony Tang
2012-2014	**MSc Computer Science** University of Calgary, Alberta, Canada Information Visualization, Human-Computer Interaction, Software Release Planning Supervisors: Dr. Sheelagh Carpendale, Dr. Tony Tang

Experience

October 2020 -
Present

Senior Research Scientist
Autodesk
Toronto, Ontario, Canada
Supervisors: Justin Matejka, Dr. George Fitzmaurice
HCI & Visualization Group

Tasks:
1. Planning, developing, and implementing scientific research projects intended to advance scientific knowledge in business-relevant areas.
2. Publishing papers in peer-reviewed scientific journals/conferences. Presenting research findings at conferences and participates in research collaborations with external research institutes and universities. Communicating and promoting the use of research findings throughout the company.
3. Consulting with product teams on the implementation of research findings into products. Generating intellectual property such as patents and trade-secrets from research findings.

January 2020 -
May 2020

Research Intern
Autodesk
Toronto, Ontario, Canada
Supervisors: Justin Matejka, Dr. George Fitzmaurice
HCI & Visualization Group

Tasks:
1. Designing and implementing a visualization interface for exploring company-related data.
2. Designing and conducting an evaluation of the project.
3. Writing a research paper based on the project and presenting it as a research exit talk at the end of the internship.

October 2019 -
December 2019

Visiting Researcher
Simon Fraser University
Burnaby, British Columbia, Canada
Supervisor: Dr. Sheelagh Carpendale
Innovis, ixLab, Department of Computer Science

Task:
1. Researching different methods of public engagement using visualizations.

June 2019 - September 2019	**Data Science Research Intern** Nokia-Bell Labs Cambridge, UK Supervisor: Dr. Daniele Quercia Social Dynamics Team

Tasks:
1. Designing and implementing two visualization interfaces for parallel projects.
2. Conducting both quantitative and qualitative evaluation of the project.
3. Writing two research papers based on the projects, as well as presenting one of the projects as a research exit talk at the end of the internship.

January 2019 - April 2019	**Teaching Assistant** Computer Science 583 - Information Visualization University of Calgary, Alberta, Canada Supervisor(s): Dr. Søren Knudsen

Tasks:
1. Helping in the design of a new tutorial curriculum that transitioned the course from the use of Java/Processing to HTML5 and JavaScript/D3.
2. Evaluating the students' assignments, project deliverables, and presentations.
3. Assisting the students with their projects by providing feedback and required information not taught in class. Includes teaching external tools such as Tableau, WebStorm, and preparing tutorial slides.

January 2018 - April 2018	**Course Instructor** Computer Science 481 - Human-Computer Interaction I University of Calgary, Alberta, Canada

Tasks:
1. Teaching a 3rd year level course on Human-Computer Interaction at the University of Calgary.
2. Designing the course curriculum by planning and selecting the topics to teach and developing the course project and assignments.
3. Preparing course materials such as lecture slides, project and assignment handouts, and course outlines.
4. Evaluating students' exams, final course project, and overseeing teaching assistants in evaluating course project deliverables and assignments.

June 2017 – October 2017	**Research Fellow** Canada Energy Regulator (CER) and University of Calgary University of Calgary, Alberta, Canada Supervisor(s): Dr. Sheelagh Carpendale, Dr. Wesley Willett, Annette Hester

Tasks:
1. Designing interactive visualizations of NEB energy data for public engagement. This involves participating in an iterative design process of creating a new visualization from scratch.
2. Leading a small team of designers as we develop our visualization design from drawing boards to deliverables. Once these design deliverables are approved, they are then sent to the development team for coding.
3. Participating in stakeholder meetings and presentations in order to understand their needs and concerns and ensuring that they get addressed in the following design iterations.
4. Researching different methods of public engagement using visualizations.

September 2012 - December 2012	**Teaching Assistant** Computer Science 481 - Human-Computer Interaction I University of Calgary, Alberta, Canada Supervisor(s): Dr. Tony Tang Tasks: 1. Assisting the students with their projects by providing feedback and required information not taught in class. Includes teaching external tools such as Visual Studio and Expression Blend and preparing tutorial slides. 2. Evaluating the students' project deliverables, assignments, and presentations.
September 2011 - December 2011	**Teaching Assistant** Computer Science 481 - Human-Computer Interaction I University of Calgary, Alberta, Canada Supervisor(s): Dr. Ehud Sharlin Tasks: 1. Helping in the design of a new tutorial curriculum that transitioned the course from the use of C# Windows Forms to C# WPF. 2. Evaluating the students' project deliverables (two out of three) and presentations. 3. Assisting the students with their projects by providing feedback and required information not taught in class. Includes teaching external tools such as Visual Studio and Expression Blend and preparing tutorial slides.
May 2011 - August 2012	**Undergraduate Research Assistant** University of Calgary, Alberta, Canada Supervisor(s): Dr. Ehud Sharlin Tasks: 1. Participating in the exploration, design, evaluation, and documentation of research projects in the areas of HCI and Personal Informatics. 2. Writing research papers, workshop position papers, posters, and technical reports. Some of which resulted in peer-reviewed publications.

Publications

Journal Articles

1. **Perception! Immersion! Empowerment! Superpowers As Inspiration for Visualization**

   Wesley Willett, **Bon Adriel Aseniero,** Sheelagh Carpendale, Pierre Dragicevic, Yvonne Jansen, Lora Oehlberg, and Petra Isenberg. 2022. Perception! Immersion! Empowerment! Superpowers as Inspiration for Visualization. IEEE Transactions on Visualization and Computer Graphics 28, 1: 22–32.
   https://doi.org/10.1109/TVCG.2021.3114844

2. **The Dreamcatcher: Interactive Storytelling of Dreams**

   Edyta Paulina Bogucka, **Bon Adriel Aseniero,** Luca Maria Aiello, and Daniele Quercia. 2021. The Dreamcatcher: Interactive Storytelling of Dreams. IEEE Computer Graphics and Applications 41, 3: 105–112.
   https://doi.org/10.1109/MCG.2021.3068794

3. **Personal Visualization and Personal Visual Analytics**

   Dandan Huang, Melanie Tory, **Bon Adriel Aseniero,** Lyn Bartram, Scott Bateman, Sheelagh Carpendale, Anthony Tang, and Rob Woodbury. 2015. Personal Visualization and Personal Visual Analytics. IEEE Transactions on Visualization and Computer Graphics 21, 3: 420–433.
   https://doi.org/10.1109/TVCG.2014.2359887

Conference Papers

4. **MeetCues: Supporting Online Meetings Experience**

   Bon Adriel Aseniero, Marios Constantinides, Sagar Joglekar, Ke Zhou, and Daniele Quercia. 2020. MeetCues: Supporting Online Meetings Experience. In 2020 IEEE Visualization Conference (VIS), 236–240. **https://doi.org/10.1109/VIS47514.2020.00054**

5. **Activity River: Visualizing Planned and Logged Personal Activities for Reflection**

   Bon Adriel Aseniero, Charles Perin, Wesley Willett, Anthony Tang, and Sheelagh Carpendale. 2020. Activity River: Visualizing Planned and Logged Personal Activities for Reflection. In Proceedings of the International Conference on Advanced Visual Interfaces, 1–9.
   https://doi.org/10.1145/3399715.3399921

6. **Go And Grow: Mapping Personal Data to A Living Plant**

   Fadi Botros, Charles Perin, **Bon Adriel Aseniero,** and Sheelagh Carpendale. 2016. Go and Grow: Mapping Personal Data to a Living Plant. In Proceedings of the International Working Conference on Advanced Visual Interfaces, 112–119. **https://doi.org/10.1145/2909132.2909267**

7. **STRATOS: Using Visualization to Support Decisions in Strategic Software Release Planning**

   Bon Adriel Aseniero, Tiffany Wun, David Ledo, Guenther Ruhe, Anthony Tang, and Sheelagh Carpendale. 2015. STRATOS: Using Visualization to Support Decisions in Strategic Software Release Planning. In Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems (CHI '15), 1479–1488. **https://doi.org/10.1145/2702123.2702426**

8. **The Looking Glass: Visually Projecting Yourself to The Past**

   Bon Adriel Aseniero and Ehud Sharlin. 2011. The Looking Glass: Visually Projecting Yourself to the Past. In Entertainment Computing (ICEC 2011), 282–287. **https://doi.org/10.1007/978-3-642-24500-8_30**

Extended Abstracts, Posters, & Workshop Papers

9. **Visualizing The 11th Classification of Diseases**
   Poster

   Bon Adriel Aseniero, Søren Knudsen, William A. Ghali, and Sheelagh Carpendale. 2019. Visualizing the 11th Classification of Diseases. In WHO Family of International Classifications Network Annual Meeting 2019 (WHO-fic 2019). **https://doi.org/10.11575/PRISM/38067**

10. **Democratizing Open Energy Data for Public Discourse Using Visualization**
    Extended Abstract

    Søren Knudsen, Jo Vermeulen, Doris Kosminsky, Jagoda Walny, Mieka West, Christian Frisson, **Bon Adriel Aseniero,** Lindsay MacDonald Vermeulen, Charles Perin, Lien Quach, Peter Buk, Katrina Tabuli, Shreya Chopra, Wesley Willett, and Sheelagh Carpendale. 2018. Democratizing Open Energy Data for Public Discourse using Visualization. In Extended Abstracts of the 2018 CHI Conference on Human Factors in Computing Systems (CHI EA '18), 1–4. **https://doi.org/10.1145/3170427.3186539**

11. **Health Visualizations at Home: Who Sees What Where**
    Poster

    Bon Adriel Aseniero, Anthony Tang, and Sheelagh Carpendale. 2018. Health Visualizations at Home: Who Sees What Where. In IEEE VIS 2018 Electronic Conference Proceedings (VIS 2018).
    http://hdl.handle.net/1880/112377

12. **Fireflies: Expressive InfoVis Inspired by Biomimicry**
    Exhibit

    Bon Adriel Aseniero, Charles Perin, Marjan Eggermont, and Sheelagh Carpendale. 2016. Fireflies: Expressive InfoVis Inspired by Biomimicry. In IEEE VIS 2016 Arts Program Exhibit.
    https://hal.inria.fr/hal-01587964/document

13. **Fireflies: Biomimicry-Inspired InfoVis for Exploring Public Opinion About an Infectious Disease**
    Poster

    Bon Adriel Aseniero, Charles Perin, Marjan Eggermont, and Sheelagh Carpendale. 2016. Fireflies: Biomimicry-Inspired InfoVis for Exploring Public Opinion about an Infectious Disease.
    https://hal.inria.fr/hal-01587936

14. **Leveraging Biological Inspiration in An Information Visualization Class**
    Workshop Position Paper

    Marjan Eggermont, Charles Perin, **Bon Adriel Aseniero,** Roxanne Fallah, and Sheelagh Carpendale. 2016. Leveraging Biological Inspiration in an Information Visualization Class. In Proceedings of the VIS 2016 workshop on Pedagogy of Data Visualization (InfoVis 2016). **https://hal.inria.fr/hal-01587906/document**

15. **River: Using Personalization to Support Reflection On Personal Activities**
    Workshop Position Paper

    Bon Adriel Aseniero, A. Tang, and S. Carpendale. 2014. A Personal Perspective on Visualization and Visual Analytics Workshop (DIS 2014). Vancouver, British Columbia, Canada.
    https://bonadriel.com/papers/river.pdf

16. **OneSpace: Shared Depth-Corrected Video Interaction**
Extended Abstract

David Ledo, **Bon Adriel Aseniero,** Saul Greenberg, Sebastian Boring, and Anthony Tang. 2013. OneSpace: Shared Depth-Corrected Video Interaction. In CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13), 997–1002. **https://doi.org/10.1145/2468356.2468534**

17. **OneSpace: Bringing Depth to Remote Communication**
Workshop Position Paper

David Ledo, **Bon Adriel Aseniero,** Saul Greenberg, Sebastian Boring, and Anthony Tang. 2013. The Future of Video Communication Workshop (CHI '13). Paris, France. **https://bonadriel.com/papers/onespace_remote-communication.pdf**

18. **Deep Personalization in Tools for Reflection**
Workshop Position Paper

Bon Adriel Aseniero, Sheelagh Carpendale, and Anthony Tang. 2012. Personal Informatics in Practice: Improving Quality of Life through Data Workshop (CHI '12). Austin, Texas, USA. **https://bonadriel.com/papers/deep_personalization.pdf**

19. **A Need for Deep Personalization: Personal Infovis Branching from Goals of Individuals**
Poster

Bon Adriel Aseniero, David Ledo, Anthony Tang, and Sheelagh Carpendale. 2012. A Need for Deep Personalization: Personal Infovis Branching from Goals of Individuals Graphics Animation and New Media (GRAND 2012). April 2012. Montreal, Quebec, Canada. **https://bonadriel.com/research/posters/grand_poster.png**

Book Chapters
20. **Constructive Visualization: A New Paradigm to Empower People to Author Visualization**

Samuel Huron, Alice Thudt, **Bon Adriel Aseniero,** Anthony Tang, and Sheelagh Carpendale. 2016. Constructive Visualization: A New Paradigm to Empower People to Author Visualization. In Surfnet / Designing Digital Surface Applications, Frank Maurer (ed.). SurfNet, Calgary, Alberta, Canada, 169–192. **https://doi.org/10.11575/PRISM/35574**

Dissertations	**21. An Autobiographical Reflection on Designing Visualizations for Personal Contexts** PhD thesis, University of Calgary **Bon Adriel Aseniero.** 2020. An Autobiographical Reflection on Designing Visualizations for Personal Contexts. **https://doi.org/10.11575/PRISM/39632** **22. An Autobiographical Reflection on Designing Visualizations for Personal Contexts** MSc thesis, University of Calgary **Bon Adriel Aseniero.** 2014. STRATOS: The Design of Visualization to Support Decision-making in Software Release Planning. **https://doi.org/10.11575/PRISM/27891**
Technical Reports (non-refereed)	**23. Showing Real-Time Recommendations to Explore the Stages of Reflection and Action** **Bon Adriel Aseniero,** Anthony Tang, Sheelagh Carpendale, and Saul Greenberg. 2013. Showing Real-time Recommendations to explore the stages of Reflection and action. **https://doi.org/10.11575/PRISM/30755**

Art Shows

2017

1. **ACAD Spotlight**
Exhibited a self-portrait painting as part of a show for the Alberta College of Art and Design Continuing Education.
Juried by Katherine Ylitalo.

Calgary, Alberta, Canada. June 2017.

2016

2. **Fireflies: Expressive Infovis Inspired by Biomimicry**
Demonstrated an artistic visualization, Fireflies, and displayed two digital art prints as part of the IEEE VIS Arts Program 2016 "Metamorphoses."

Baltimore, Maryland, USA. October 2016.

3. **Fireflies**
Displayed 8 digital art prints of an artistic visualization, Fireflies, as part of the art show entitled "Murmuration" curated by Marjan Eggermont. Herringer-Kiss Gallery.

Calgary, Alberta, Canada. September 2016.

Invited Talks and Presentations

2021

1. **"Introduction To D3"**

   Guest Lecture at the Department of Computer Science, Simon Fraser University, Burnaby, British Columbia, Canada. Hosted by Dr. Sheelagh Carpendale. (Remote)

2. **"Reflections On the Design of Delightful Visualizations"**

   Guest talk at the Department of Computer Science, University of Victoria, British Columbia, Canada. Hosted by Dr. Charles Perin (Remote)

2020

3. **"Activity River: Visualizing Planned and Logged Personal Activities for Reflection"**

   Presentation for the International Conference on Advanced Visual Interfaces (AVI 2020). Island of Ischia, Salerno, Italy. September 28, 2020. (Remote)

2019

4. **"Introduction To D3"**

   Guest Lecture at the Department of Computer Science, Simon Fraser University, Burnaby, British Columbia, Canada. Hosted by Dr. Sheelagh Carpendale.

5. **"Visualizing The 11th International Classification of Diseases"**

   Presentation for the WHO Family of International Classifications Network Annual Meeting 2019 (WHO-fic 2019). Banff, Alberta, Canada. October 9, 2019. (Selected)

6. **"Sketching"**

   Guest lecture at the Department of Computer Science, University of Calgary, Alberta, Canada. Hosted by Dr. Søren Knudsen.

2018   **7. "Introduction To Information Visualization"**

Guest lecture at the Department of Computer Science, University of Calgary, Alberta, Canada.

2017   **8. "The Looking Glass: Visually Projecting Yourself to The Past"**

Guest talk at the Department of Computer Science, University of Calgary, Alberta, Canada. Hosted by Dr. Wesley Willett.

2015   **9. "STRATOS: Using Visualization to Support Decisions in Strategic Software Release Planning"**

Presentation for the 33rd ACM SIGCHI conference on Human Factors in Computing Systems (CHI 2015). Seoul, South Korea. April 21, 2015.

2011   **10. "The Looking Glass: Visually Projecting Yourself to The Past"**

Presentation for the University of Calgary Student Union's Undergraduate Research Symposium. November 25, 2011. (Chosen along with two others from 130 participants).

11. "The Looking Glass: Visually Projecting Yourself to The Past"

Presentation for the 10th International Conference on Entertainment Computing (ICEC 2011), Vancouver, British Columbia, Canada. October 8, 2011.

Service

Design Chair

Tasks:
1. Developing the design identity of the arts program, including the website and printed catalogue.
2. Participating in planning and execution of the arts program.

IEEE VIS Arts Program 2022
IEEE VIS Arts Program 2021

Student Volunteer Chair

Tasks:
1. Participating in planning and execution of the IEEE VIS conference remotely.
2. Managing the student volunteer program before and during the conference.
3. Managing the student volunteer website and running the selection process for student volunteers.

IEEE VIS 2021
IEEE VIS 2020
IEEE VIS 2019

Senior Student Volunteer

Tasks:
1. Acting as a Day-Captain/Senior student volunteer to manage other junior volunteer's jobs.
2. Participating in assigned jobs to keep the conference running well, in a team setting.

ACM CHI 2019   IEEE VIS 2018
ACM CHI 2018   IEEE VIS 2017
ACM CHI 2017   IEEE VIS 2016
ACM CHI 2016
ACM CHI 2015

Student Volunteer

Task:
1. Participating in assigned jobs to keep the conference running well, in a team setting.

ACM CHI 2014   IEEE VIS 2015
ACM CHI 2013
ACM CHI 2012

Reviewer   Task:
1. Reviewing paper submissions.

ACM CHI 2022	IEEE VIS 2022
ACM CHI 2021	IEEE VIS 2021
ACM CHI 2020	IEEE VIS 2019
ACM CHI 2019	IEEE VIS 2018
ACM CHI 2016	
ACM CSCW 2021	ACM DIS 2020
	ACM DIS 2017
ACM ISS 2018	IEEE PacificVis 2018
ACM MobileHCI 2018	MUM 2015

Awards & Scholarships

2016-2019
1. Natural Sciences and Engineering Research Council of Canada (NSERC) Doctoral Scholarship
federal

2015-2019
2. Eyes High Doctoral Recruitment Scholarship
institutional

2015-2017
3. Alberta Innovates Technology Futures (AITF) Doctoral Scholarship
provincial

2014
4. Graduate Student Scholarship
institutional

2012-2014
5. Alberta Innovates Technology Futures (AITF) MSc Scholarship
provincial

2012
6. Queen Elizabeth II Graduate Scholarship
provincial | withdrawn

7. Computer Science Graduate Studies Award
institutional

2011
8. Faculty of Science Dean's List

9. Jason Lang Scholarship
provincial

2010
10. Sekiguchi Book Prize Awards
institutional

2008
11. Student Peer Awards
institutional

12. Alexander Rutherford Scholarship
provincial

Languages

English Professional Working Proficiency

Tagalog/Filipino Professional Working Proficiency

Japanese Elementary Proficiency
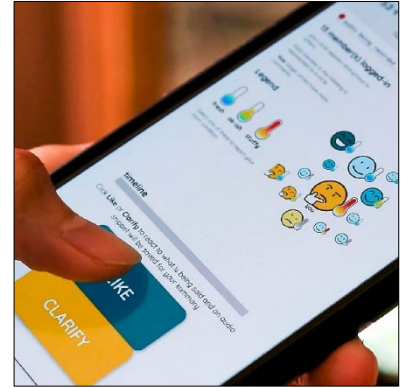
Selected Projects

Perception! Immersion!
Empowerment! Superpowers as
Inspiration for Visualization
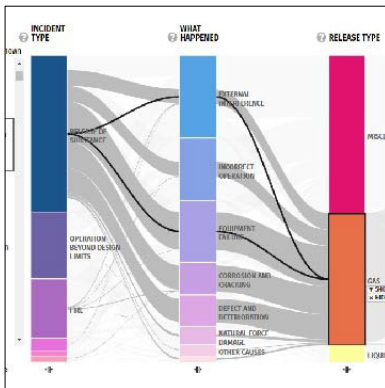*IEEE TVCG 2021*

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Activity River: Visualizing
Planned and Logged Personal
Activities for Reflection
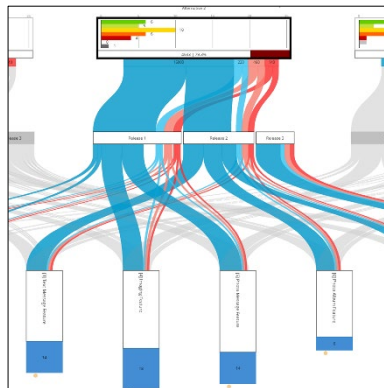*AVI 2020*

[DOI]

MeetCues: Supporting Online
Meetings Experience
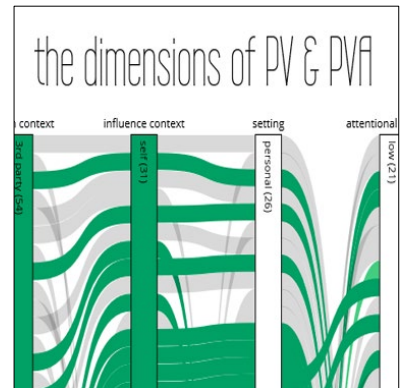*IEEE VIS 2020*

[DOI]

Open Data: Visualizing
Incidents at Canada Energy
Regulator (CER) Regulated
Pipelines and Facilities
2017

[APP]

STRATOS: A Visualization for
Supporting Decision-Making in
Strategic Software Release
Planning
ACM CHI 2015

[DOI]

Personal Visualization and
Personal Visual Analytics
IEEE TVCG 2015

[DOI]