

Vanessa Peña-Araya

Curriculum Vitae

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Date of birth: February 27th, 1988

I am currently a Post-Doctoral Fellow at **ILDA** team.

Research Experience

- Since Dec 2018 **Post-Doctoral Fellow**, *ILDA team, Inria, Université Paris-Sud, Paris, France*, I've been working on understanding the effectiveness of different geo-temporal visualizations strategies for, on one hand, analyzing correlation between two variables and, on the other, propagation dynamics over space and time.
- Jan - Oct 2018 **Research and Development Engineer**, *Inria Chile*, I participated in a data analysis project, in an application for government funding for a research-development project in collaboration with a local company and a project in collaboration with a local university. I also gave a couple of talks and seminars.
- Fall quarter 2015 **Student internship**, *Human Centered Data Science, HCDE, University of Washington, Seattle, United States*, Participated in a research project to improve and study a visual interface to help users to qualitative coding.
- Summer 2011 **Student internship**, *Loria - INRIA Nancy Grand Est, Cortex Team, Vandoeuvre-l'ès-Nancy, France*, Research and analysis of facial animation algorithms based on interpolation techniques using MPEG-4 standard and Candide-3.

Education

- 2013-2018 **Computer Science PhD**, *Computer Science Department, University of Chile, Santiago, Chile*.
- 2006-2012 **Computer Science Engineer**, *Computer Science Department, University of Chile, Santiago, Chile*.

Publications

- 2020 (to appear) **Vanessa Peña-Araya, Anastasia Bezerianos, Emmanuel Pietriga**, *A Comparison of Geographical Propagation Visualizations*, In Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems (CHI '20).
- 2019 **Vanessa Peña-Araya, Emmanuel Pietriga, Anastasia Bezerianos**, *A Comparison of Visualizations for Identifying Correlation over Space and Time*, Proceedings IEEE Transactions on Visualization and Computer Graphics.
- 2018 **Francisco J. Gutierrez, Jocelyn Simmonds, Nancy Hitschfeld, Cecilia Casanova, Cecilia-Sotomayor, Vanessa Peña-Araya**, *Assessing Software Development Skills Among K-6 Learners in a Project-Based Workshop with Scratch*, ICSE SEET - Software Engineering Education and Training.
- 2017 **Vanessa Peña-Araya, Mauricio Quezada, Barbara Poblete and Denis Parra**, *Gaining Historical and International Relations Insight from Social Media: A Spatio-Temporal Context-Aware Model for News Events in Twitter*.
Nan-Chen Chen, Rafal Kocielnik, Margaret Drouhard, Vanessa Peña-Araya, Jina Suh, Keting Cen, Xiangyi Zheng and Cecilia R. Aragon, *Aeonium: Visual Analytics to Support Collaborative Qualitative Coding*, Proceedings of the IEEE Pacific Visualization Symposium (PacificVis 2017).
- 2016 **Nan-Chen Chen, Rafal Kocielnik, Margaret Drouhard, Vanessa Peña-Araya, Jina Suh, Keting Cen, Xiangyi Zheng and Cecilia R. Aragon**, *Challenges of Applying Machine Learning to Qualitative Coding*, CHI 2016 workshop on Human Centered Machine Learning (HCML 2016).
- 2015 **Mauricio Quezada, Vanessa Peña-Araya and Barbara Poblete**, *Location-Aware Model for News Events in Social Media*, SIGIR 2015, pages 935-938.
Vanessa Peña-Araya, Mauricio Quezada and Barbara Poblete, *Galean: Visualization of Geolocated News Events from Social Media*, SIGIR 2015, pages 1041-1042.

Jazmine Maldonado, Vanessa Peña-Araya and Barbara Poblete, *Spatio and Temporal Characterization of Chilean News Events in Social Media*, . SIGIR 2015 Workshop on Temporal, Social and Spatially-aware Information Access (TAIA'15), August 13, 2015, Santiago, Chile.

2014 **Alexandre Bergel, Vanessa Peña Araya**, *Increasing Test Coverage with Hapao*, Sci. Comput. Program. 79: 86-100.

2012 **Alexandre Bergel, Vanessa Peña, Juan Pablo Sandoval**, *The Hidden Face of Execution Sampling*, Proceedings of the 1st Smalltalk Direction Workshop – Collocated with STIC'12.

2011 **Vanessa Peña Araya**, *Test Coverage With Hapao*, Proceedings of the 5th Workshop on Dynamic Languages and Applications – Collocated with TOOLS 2011.

Vanessa Peña Araya, *Test Blueprint: An Effective Visual Support for Test Coverage*, Proceedings of the International Conference on Software Engineering (ICSE), 2011, ACM Press. Student Research Competition track, pages 1140-1142.

Outreach

2015 **Nancy Hitschfeld, Francisco Gutiérrez, Vanessa Peña-Araya and Jorge Romo**, *Desarrollando el Pensamiento Computacional: Acercando la Computación a Niñas y Niños de Chile*, Revista Bits de Ciencia, DCC, Universidad de Chile, pages 34-39.

<https://www.dcc.uchile.cl/Bitsdeciencia12.pdf>

Vanessa Peña Araya, *Modelamiento y Visualización del Contexto Geotemporal de Eventos Extraídos de Redes Sociales en Línea*, Revista Bits de Ciencia, DCC, Universidad de Chile, pages 64-68.

<https://www.dcc.uchile.cl/Bitsdeciencia12.pdf>

Selected Professional Experience

At university

Sept to Dec 2019 **Teaching Assistant - INF552: Data Visualization (2019-2020)**, *École Polytechnique*, Paris, France, Master level course.

Spring 2016, Spring 2017 **Teaching Assistant - CC3001: Algorithms and Data Structures**, *University of Chile, FCFM*, Santiago, Mandatory course for 3rd year Computer Science Engineering students. It covers the basis of algorithms designs and data structures.

Fall 2016, Fall 2017 **Teaching Assistant - CC5208: Information Visualization**, *University of Chile, FCFM*, Santiago, Elective course that teaches the basics of Information Visualization.

Autumn 2014 **Teaching Assistant, CC1000 - Computational Tools for Engineering and Science**, *University of Chile, FCFM*, Santiago, Introductory course to first year engineering students focused on teaching some basics tools and Matlab.

Autumn 2013 **Teaching Assistant, CC1001 - Introduction to Computer Science**, *University of Chile, FCFM*, Santiago, Introductory course to first year engineering students. Problem-solving and programming with Python..

Spring 2010, autumn 2011 **Teaching Assistant, CC3002 - Design and Programming Methodologies**, *University of Chile, FCFM*, Santiago, The course covers good programming practices and design patterns. Mandatory course for 3th year Computer Science Engineering students. In spring 2010 I worked grading homework and in Autumn 2011 I worked as assistant teacher.

Autumn 2010 **Teaching Assistant, EI2001 - Project workshop**, *University of Chile, FCFM*, Santiago, Mandatory course for second year students classified in different subjects. I worked helping students to build robots with LEGO Mindstorms and LeJOS..

Other

Object Profile, I was cofounder of Object Profile (<http://objectprofile.com/>) and was involved in the development of Kai, Hapao, Loom and Roassal, four Smalltalk-based products. I'm no longer part of the company.

Spring 2009 **Web development**, *University of Chile, FCFM*, Santiago, I was part of the design and development team of the web page for the conservation and order of the Anales de Ingeniería (engineering annals) on the University of Chile's Library. Link to the web: <http://www.anales-ii.ing.uchile.cl> .

Extracurricular Activities

July 2016 to January 2019 **Co-founder of Niñas Pro(gramadoras)**, *University of Chile, FCFM, Santiago*, NiñasPro(gramadoras) is an initiative that aims to reduce the gender gap in STEM (Science, Technology, Engineering and Mathematics), mainly focused in high school girls. Our main activity is a competitive programming workshop oriented to train our students to compete at the Olimpiadas Chilenas de Informática (<http://www.olimpiada-informatica.cl/>). We also do talks at schools aimed to show that computer science is fun and not only for men. Although I'm still part of the foundation I no longer participate in their activities as I moved to France.

<http://ninasprogramadoras.cl/>

Winter 2014 and 2013, **Developing Computational Thinking (Scratch)**, *University of Chile, FCFM, Santiago*, Short workshops for developing computational thinking on kids by using Scratch. It was focused on girls and boys of 9 to 12 years old. I was a teacher in the workshops and I helped preparing the material.

Awards

2016 **El Mercurio**, *Santiago, Chile*, Selected as one of Chile's "100 Jóvenes Líderes" (100 Young leaders under 35) by El Mercurio (Dec. 2016), <http://impresa.elmercurio.com/Pages/NewsDetail.aspx?dt=2016-12-10&PaginaId=44&SupplementId=1&BodyId=0>.

2012 **Best Graduated Student**, *Computer Science Department, University of Chile, Santiago, Chile*.

2012 **ACM**, *San Francisco, USA*, Awarded the second place in ACM Student Research Competition Grand Finals, undergraduate category, <http://src.acm.org>.

2011 **ICSE 2011**, *Honolulu, Hawaii, USA*, Awarded the second place in ACM Student Research Competition, undergraduate category, <http://src.acm.org/winners.html>.

2011 **CursorLab**, *Santiago, Chile*, Second place in Android competition organized by Cursorlab, <http://www.dcc.uchile.cl/node/459>.

2009-2011 **Outstanding Undergraduate Student Award**, *Computer Science Department, University of Chile, Santiago, Chile*, <http://escuela.ing.uchile.cl/la-escuela/alumnos-destacados/>.

Languages

Spanish **Native**.

English **Fluent**, Good understanding in written and spoken English. Correct writing and speaking.

French **Basic**, Understanding of daily small conversations and writing.