

Denis Parra Santander

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Research Group: Head of the Social Computing and Visualization Lab (SocVis) <http://socvis.ing.puc.cl>

Interests

Recommender Systems, Data Mining, HCI and Information Visualization, Social Network Analysis.

Education

- 2008-2013 **University of Pittsburgh**, Pittsburgh, PA, USA
PhD in Information Science. Adviser: Professor Peter Brusilovsky
- 1997-2002 **Universidad Austral de Chile**, Valdivia, Chile.
Informatics Institute, Department of Engineering. Bachelor in Engineering Sciences.
Civil Engineer in Informatics, final GPA 6.4 out of 7.0, with highest honors (Summa Cum Laude)

Academic Awards and Honors

- 2017 **Outstanding reviewer award**, WWW 2017 conference.
- 2011 **Best Student Paper Award at User Modelling, Adaptation and Personalization (UMAP) 2011 Conference**. Girona, Spain.
- 2007 **Fulbright-Conicyt Scholarship** to pursue PhD studies in the USA.
- 2000-2002 **Best student of Civil Engineering in Informatics** award, Universidad Austral de Chile.
- 1997 Best entrance score to Civil Engineering in Informatics program, Universidad Austral de Chile.

Projects

- 2016-2018 Associate Researcher in Fondef IDeA Project ID16I10222 “**Observatorio Digital de Delincuencia en Chile: Un sistema inteligente de apoyo a la industria automotriz chilena**”. CONICYT.
- 2016-2019 Leading Researcher in Fondecyt Initiation Project 11150783 “**Dealing with Information Overload Using Intelligent Recommender System Interfaces**”. CONICYT.
- 2015-2016 Co-PI in project “**Visualization and Recommendation of Large Image and Text Collections toward Effective Sensemaking**”. Andrónico Luksic research grant for PUC Chile-Notre Dame collaboration. PI: Prof. Chaoli Wang, University of Notre Dame.
- 2014-2017 Researcher in project “**Nucleo milenio research center for entrepreneurial strategy under uncertainty (NS130028)**”, PI: Prof. Stephen Zhang, PUC Chile.

Research: Journal Publications

- 2017 [ISI] V Peña-Araya, M Quezada, B Poblete, D Parra. *Gaining historical and international relations insights from social media: spatio-temporal real-world news analysis using Twitter*. EPJ Data Science [<https://doi.org/10.1140/epjds/s13688-017-0122-8>]
- [ISI] Christoph Trattner, Denis Parra, David Elswiler, *Monitoring obesity prevalence in the United States through bookmarking activities in online food portals*, PloS One, [<https://doi.org/10.1371/journal.pone.0179144>]
- 2016 Katrien Verbert, Denis Parra, Peter Brusilovsky, *Agents vs. Users: Visual Recommendation of Research Talks with Multiple Dimensions of Relevance*, ACM Transactions on Interactive Intelligent Systems, ACM, [<https://doi.org/10.1145/2946794>]

[ISI] Chen He, Denis Parra, Katrien Verbert, *Interactive recommender systems: a survey of the state of the art and future research challenges and opportunities*, Expert Systems with Applications, Elsevier [<http://dx.doi.org/10.1016/j.eswa.2016.02.013>]

[ISI] Peter Brusilovsky, Jung Sun Oh, Claudia Lopez, Denis Parra, Wei Jeng. *Linking Information and People in a Social System for Academic Conferences*. New Review of Hypertext and Hypermedia, Taylor and Francis [<http://dx.doi.org/10.1080/13614568.2016.1179796>]

[ISI] Mar Pérez-Sanagustin, Denis Parra, Renato Verdugo, Gonzalo García-Galleguillos, Miguel Nussbaum, *Using QR codes to increase user engagement in museum-like spaces*, Computers in Human Behavior, Elsevier [<http://dx.doi.org/10.1016/j.chb.2016.02.012>]

[ISI] Yi Gu, Chaoli Wang, Jun Ma, Robert J Nemiroff, David L Kao, Denis Parra, *Visualization and recommendation of large image and text collections toward effective sensemaking*, Information Visualization, SAGE Publications [<http://dx.doi.org/10.1177/1473871616630778>]

[ISI] Denis Parra, Christoph Tratter, Diego Gomez, Matias Hurtado, Xidao Wen, Yu-Ru Lin, *Twitter in academic events: A study of temporal usage, communication, sentimental and topical patterns in 16 Computer Science conferences*, Computer Communications [<http://dx.doi.org/10.1016/j.comcom.2015.07.001>]

2015 [ISI] Denis Parra, Peter Brusilovsky, *User-controllable personalization: A case study with SetFusion*, Int. J. Human-Computer Studies [<http://dx.doi.org/10.1016/j.ijhcs.2015.01.007>]

2011 Trousov, A., Darena, F., Žižka, J., Parra, D., Brusilovsky, P. *Vectorised Spreading Activation Algorithm for Centrality Measurement*. Acta Universitatis agriculturae et silviculturae Mendelianae Brunensis. 2011. sv. LIX, no. 7, s. 469--476. ISSN 1211-8516

Book Chapters

2012 Denis Parra, Shaghayegh Sahebi. *Chapter 8, Recommender Systems: Sources of Knowledge and Evaluation Metrics*. Advanced Techniques in Web Intelligence, Volume 2, Springer-Verlag. Editors: Juan D. Velásquez, Vasile Palade and Lakhmi C. Jain.

Research: Conference and Workshop Papers

2017 Katrien Verbert, Peter Brusilovsky, Chirayu Wongchokprasitti, Denis Parra, and Bruno Cardoso. 2017. **Supporting Conference Attendees with Visual Decision Making Interfaces**. In Proceedings of the 22nd International Conference on Intelligent User Interfaces Companion.

Gabriel Sepulveda, Vicente Dominquez, Denis Parra. 2017. *pyRecLab: A Software Library for Quick Prototyping of Recommender Systems*. Proceedings of the Poster Track of the 11th ACM Conference on Recommender Systems

Vicente Dominquez, Pablo Messina, Denis Parra, Christopher Tratter, Alvaro Soto, Domingo Mery 2017. *Comparing Neural and Attractiveness-based Visual Features for Artwork Recommendation*. In Proceedings of the 2nd Workshop on Deep Learning for Recommender Systems

Felipe del Río, Denis Parra, Jovan Kuzmicic, Erick Svec 2017. *Towards a Recommender System for Undergraduate Research*. Proceedings of the Poster Track of the 11th ACM Conference on Recommender Systems

Manuel Garretón, Karina Hyland, Denis Parra. 2017. *Understanding People's Interaction with Neural Sci-Art*. Proceedings of the Visual Arts Program, IEEE Visualization Conference.

- 2016 Ivana Andjelkovic, Denis Parra, John O'Donovan. ***Moodplay: Interactive Mood-based Music Discovery and Recommendation***. In proceedings of the Conference on User Modeling, Adaptation and Personalization 2016, Halifax, Canada.
- Christoph Trattner, Alexander Oberegger, Lukas Eberhard, Denis Parra, Leandro Balby Marinho. ***Understanding the Impact of Weather for POI Recommendations***. Proceedings of the Workshop on Recommenders in Tourism, co-located with 10th ACM Conference on Recommender Systems (RecSys 2016) Boston, MA, USA, September 15, 2016.
- Katrien Verbert, Karsten Seipp, Chen He, Denis Parra, Chirayu Wongchokprasitti, Peter Brusilovsky. ***Scalable Exploration of Relevance Prospects to Support Decision Making***. In Proceedings of the Joint Workshop on Interfaces and Human Decision Making for Recommender Systems, co-located with ACM Conference on Recommender Systems (RecSys 2016) Boston, MA, USA, September 16, 2016.
- 2015 Alfredo Cobo, Denis Parra, Jaime Navón. ***Identifying Relevant Messages in a Twitter-based Citizen Channel for Natural Disaster Situations***. In proceedings of the 3rd Workshop on Social Web for Disaster Management, co-located at the 24th International World Wide Web Conference 2015, Florence, Italy.
- José Miguel Herrera, Denis Parra, Bárbara Poblete. ***Retrieving Relevant Conversations for Q&A on Twitter***. In Proceedings of the International Workshop on Social Personalization and Search 2015, co-located at SIGIR 2015, Santiago, Chile.
- Santiago Larraín, Christoph Trattner, Denis Parra, Eduardo Graells-Garrido, Kjetil Norvag. ***Good Times Bad Times: A Study on Recency Effects in Collaborative Filtering for Social Tagging***. In Proceedings of the ACM Conference in Recommender Systems 2015, Vienna, Austria.
- Leandro Balby-Marinho, Cristoph Trattner, Denis Parra. ***"Are Real-World Place Recommender Algorithms Useful in Virtual World Environments?"***. In Proceedings of the ACM Conference in Recommender Systems 2015, Vienna, Austria.
- Santiago Larraín, Denis Parra, Alvaro Soto. ***Towards Improving Top-N Recommendation by Generalization of SLIM***. Poster at the ACM Conference in Recommender Systems 2015, Vienna, Austria.
- Ruth Garcia, Diego Gomez, Denis Parra, Christoph Trattner, Andreas Kaltenbruner, Eduardo Graells. ***Language, Twitter and Academic Conferences***. In Proceedings of the ACM Conference in Hypertext and Social Media 2015, Northern Cyprus.
- 2014 Emanuel Lacic, Dominik Kowald, Denis Parra, Martin Kahr, Christoph Trattner. ***Towards a Scalable Social Recommender Engine for Online Marketplaces: The Case of Apache Solr***. Paper at the 5th Workshop on Social Recommender Systems, at the 23rd International World Wide Web Conference 2014, Korea, Seoul.
- Christoph Trattner, Denis Parra, Lukas Eberhard, Xidao Wen. ***Who will Trade with Whom? Predicting Buyer-Seller Interactions in Online Trading Platforms through Social Networks***. Poster at the 23rd International World Wide Web Conference 2014, Korea, Seoul.
- Xidao Wen, Denis Parra, and Christoph Trattner. ***How groups of people interact with each other on Twitter during academic conferences***. In Proceedings of the companion publication of the 17th ACM conference on Computer supported cooperative work & social computing 2014.
- Denis Parra, Peter Brusilovsky, and Christoph Trattner. 2014. ***See what you want to see: visual user-driven approach for hybrid recommendation***. In Proceedings of the 19th international conference on Intelligent User Interfaces (IUI '14). ACM, New York, NY, USA, 235-240

- Shuguang Han, I-Han Hsiao, Denis Parra. *A Study of Mobile Information Exploration with Multi-touch Interactions*. International Social Computing, Behavioral Modeling and Prediction Conference, 2014, Washington, DC, USA.
- 2013 Denis Parra and Peter Brusilovsky. *A field study of a visual controllable talk recommender*. In *Proceedings of the 2013 Chilean Conference on Human - Computer Interaction* (ChileCHI 2013). ACM, New York, NY, USA, 56-59.
- Katrien Verbert, Denis Parra, Peter Brusilovsky and Erik Duval. *Visualizing Recommendations to Support Exploration, Transparency and Controllability*. 18th ACM Conference In Intelligent User Interfaces, CA, USA, March 19-22
- Guerra, J., Parra, D., Brusilovsky, P. *Encouraging Online Student Reading with Social Visualization*. 2nd Workshop on Intelligent Support in Learning Groups in conjunction with 16th International Conference on Artificial Intelligence in Education AIED 2013; Memphis, USA, July 9-13, 2013
- 2012 Christoph Trattner, Yi-Ling Lin, Denis Parra, Zhen Yue and Peter Brusilovsky. *Evaluating Tag-Based Information Access in Image Collections*. 23rd ACM Conference on Hypertext and Adaptive Hypermedia. Milwaukee, WI, USA, June 25-28. (Nominated to best paper award)
- I-Han Hsiao, Julio Guerra, Denis Parra, Fedor Bakalov, Brigitta König-Ries, and Peter Brusilovsky. *Comparative Social Visualization for Personalized E-Learning*. International Working Conference Advanced Visual Interfaces, AVI 2012, Capri, Italy, May 21-25.
- Denis Parra. *Beyond Lists: Studying the Effect of Different Recommendation Visualizations*. Doctoral Consortium of RecSys 2012, Dublin, Ireland.
- 2011 Denis Parra, Xavier Amatriain. *Walk the Talk: Analyzing the Relation between Implicit and Explicit Feedback for Preference Elicitation*. UMAP 2011, Girona, Spain. (Best student paper award)
- Denis Parra, Alexandros Karatzoglou, Xavier Amatriain, Idil Yavuz *Implicit Feedback Recommendation via Implicit-to-Explicit Ordinal Logistic Regression Mapping*. In CARS Workshop at RecSys 2011. Chicago, IL, USA.
- 2010 Denis Parra-Santander, Peter Brusilovsky. *Improving Collaborative Filtering in Social Tagging Systems for the Recommendation of Scientific Articles*. Web Intelligence 2010, Toronto, Canada.
- Peter Brusilovsky, Denis Parra, S. Sahebi, C. Wongchokprasitti. *Collaborative information finding in smaller communities: The case of research talks*. CollaborateCom 2010, Chicago, IL, USA.
- Chirayu Wongchokprasitti, Peter Brusilovsky, Denis Parra. *Conference Navigator 2.0 : Community-Based Recommendation for Academic Conferences*. Workshop - IUI 2010, hong- Kong, China
- 2009 D. Parra, P. Brusilovsky. *Evaluation of Collaborative Filtering Algorithms for Recommending Articles on CiteULike*, Workshop on Web 3.0, Hypertext 2009, Torino, Italy.
- A. Trousov, D. Parra, P. Brusilovsky. *Spreading Activation Approach to Tag-aware Recommenders: Modelling Similarity on Multidimensional Networks*, Workshop on Recommender Systems, RecSys 2009, New York, NY, USA
- D. Parra, P. Brusilovsky, *Collaborative Filtering for Social Tagging Systems: an Experiment with CiteULike*. RecSys 2009, New York, NY, USA
- 2005 E. Scheihing, S. Carrasco, D. Guerra, D. Parra. *An Adaptive Web Platform based on a Multiagent System and Ontologies*, TISE 2005, Santiago, Chile.

Teaching Experience

- 2017- **Information Visualization**, PUC Chile, Taught at 2nd term each year.
- 2014-2017 **Introduction to the Major of Computer Science**. PUC Chile. Taught for four terms.
- 2014-2017 **Recommender Systems**, graduate course. PUC Chile. Taught at 2nd term each year.
- 2014-2017 **Data Mining**, graduate course, MPGI master program. PUC Chile. Taught at 1st term each year.
- 2006-2007 **Software Engineering (UML)**. Universidad Austral de Chile. Taught for two terms.
- Introduction to Programming (Java)**. Universidad Austral de Chile. Taught for one term.
- 2003-2004 **Introduction to Programming (Java)**. Universidad Austral de Chile. Taught for four terms.
- 2004 **Seminar on Multiagent Systems (Java)**. Universidad Austral de Chile. Taught for one term.

Professional and Research Experience

- 06/10-09/10 **Research Internship on Implicit Feedback for Recommender Systems**. Telefonica Research & Development, Barcelona. Research Tutor: Dr. Xavier Amatriain (currently at Quora)
- 06/09-09/09 **Research internship on Spreading Activation Methods**. KDEG lab at Trinity College Dublin and IBM Dublin. Research tutor: Dr. Alexander Troussov.
- 06/07-12/08 **Co-founder and Project Manager at Perceptum TI**, www.perceptum.cl, Valdivia, Chile
- 02/05-12/07 **IT Consultant, Cards Aquaculture Services**, Puerto Montt, Chile
- Elicitation of hardware acquisition, project manager of software development.
- 07/03-01/04 **Software Analyst and Programmer, Universidad Austral de Chile**, Valdivia, Chile
- Design and development of a Learning Management System. (PHP/MySQL)
 - Implementation of a web search engine for Chilean research information (PHP, SQLServer)
- 01/02-03/02 **Professional internship, Software Developer. DMR Consulting**, Santiago, Chile
- Design and development of an Intranet for management of documentation related to Enterprise Application Integration projects (ASP/ SQL Server)
- 01/01-03/01 **Professional internship, Software Developer. Centro Informático UACH**, Valdivia, Chile
- Design and development of a tourism information system for SERNATUR, National Service of Tourism (PHP, Perl, PostgreSQL)

Reviewing Activities/ Program Committee

- 2018 Reviewer of ACM IUI conference
Reviewer of The Web Conference (former World Wide Web Conference)
- 2017 Reviewer of the CIKM 2017 conference
Reviewer of the ACM RecSys 2017 conference
Reviewer of the Transactions on Interactive and Intelligent Systems, ACM.
Reviewer of 26th International World Wide Web Conference on the (WWW 2017)
Reviewer of ACM SAC Conference 2017.
- 2016 Reviewer of the Journal "Social Network Analysis and Mining", Springer.
Reviewer of the Transactions on Knowledge and Data Engineering, IEEE.
Reviewer of the Transactions on Interactive and Intelligent Systems, ACM.
Reviewer of 25th International World Wide Web Conference on the (WWW 2016)
Reviewer of the ACM RecSys 2016 conference
Reviewer of the ACM UMAP 2016 conference
Reviewer of ICSWM 2016 conference
Reviewer of ACM Hypertext 2016 conference
Reviewer of ACM IUI 2016 conference
Reviewer of ACM CHI 2016 conference

- 2014-2015 Reviewer of the Journal “Computer Communications”, Elsevier.
Reviewer of the Journal “Social Network Analysis and Mining”, Springer.
Reviewer of 24th International World Wide Web Conference on the (WWW 2015)
Reviewer of posters/demos at ACM Recommender Systems 2015 conference
Reviewer of ACM Hypertext 2015 conference
Reviewer of ACM CHI 2015 conference
- 2013 Reviewer of the Journal “Interacting with Computers”, Oxford University Press.
Reviewer of 23rd International World Wide Web Conference on the (WWW 2014)
- 2012 Reviewer of 5th International Conference on Educational Data Mining (EDM 2012)
Program Committee of the 2012 Context-Aware Recommender Systems Workshop (CARS 2012)
- 2011 Reviewer of 2011 IEEE/WIC/ACM International Conference on Web Intelligence (WI-11)
- 2009 Reviewer of 2009 IEEE/WIC/ACM International Conference on Web Intelligence (WI-09)

Volunteering Activities

- 2009 – 2012 Technical consultant for non-profit student organization “Purposeful Pennies”, which supports organizations that help children with economical needs for education.

Hobbies

- Sports Tennis, running, soccer and rowing.
- Others I like writing, mainly poetry. I also like to read novels (J. Cortázar, J.L. Borges, J. Joyce) and poetry (P. Neruda, N. Parra, W. Whitman, J. Teillier, F.G. Lorca)