Pablo Castells

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Short Bio

I am an Associate Professor at the Computer Science Department of the Autónoma University of Madrid, and an Amazon Scholar. My research interests are in the fields of information retrieval and recommender systems, dealing with models, theory, algorithms and evaluation. I am interested in the problems involved in the design of evaluation experiments, algorithmic and evaluation bias, novelty and diversity, and interactive recommendation. I have coauthored over 100 research publications in these areas, in top tier conferences including ACM SIGIR (best full paper award in 2018) and ACM RecSys, and journals such as ACM TOIS, IP&M, Information Retrieval, ACM TWEB, and IEEE TKDE, for which Google Scholar reports an h-index of 47. I served as program co-chair of RecSys 2016 and SIGIR 2021, and general co-chair of ECIR 2020 and SIGIR 2022.

Research Interests

Main fields: information retrieval and recommender systems. Research areas: evaluation, algorithms, theory. Specific topics: experiment design, bias in evaluation and algorithms, novelty and diversity, personalization, social network analysis.

Education

Universidad Autónoma de Madrid, Spain

> PhD Computer Science, April 1994
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> BSc/MSc Mathematics, June 1989

Languages

English (proficient), French (proficient), Portuguese (intermediate), Spanish (native)

Employment

Amazon, Madrid, Spain

> Amazon Scholar, February 2021 – present

Universidad Autónoma de Madrid, Madrid, Spain

> Associate professor, July 1999 – present
>
> Lecturer, October 1995 – June 1999

Information Sciences Institute, Univ. of Southern California, Marina del Rey, CA, USA

> Postdoctoral fellow, April 1994 – September 1995

Knowledge Engineering Institute, Madrid, Spain

> Junior researcher, April 1990 – March 1994

Awards

- Best full paper award at ACM SIGIR 2018.
- Oustanding PC member at ACM WSDM 2020.

Event Organization

General Co-chair

- 45th ACM Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2022). Madrid, Spain, July 2022.
- 42nd European Conference in Information Retrieval (ECIR 2020). Lisbon, Portugal, April 2020.

- 1st Spanish Information Retrieval Conference (CERI 2010). Madrid, Spain, June 2010.

Program Co-chair

- 44th ACM Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2021). Montréal, Canada, July 2021.
- 10th ACM Conference on Recommender Systems (RecSys 2016). Boston, MA, USA, September 2016.

Workshop Co-organizer

- M. Ekstrand, A. Chaney, P. Castells, D. Rohde, M. Slokom, R. Burke. Workshop on Simulation Methods for Recommender Systems (SimuRec 2021) at the 15th ACM Conference on Recommender Systems (RecSys 2021). Amsterdam, Netherlands, September 2021.
- P. Adamopoulos, A. Bellogín, P. Castells, P. Cremonesi, H. Steck. International Workshop on Recommender System Evaluation: Dimensions and Design (REDD 2014) at the 8th ACM Conference on Recommender Systems (RecSys 2014). Foster City, CA, USA, October 2014.
- A. Bellogín, P. Castells, A. Said, D. Tikk. International Workshop on Reproducibility and Replication in Recommender Systems Evaluation (RepSys 2013) at the 7th ACM Conference on Recommender Systems (RecSys 2013). Hong Kong, China, October 2013.
- P. Castells, F. Hopfgartner, M. Lalmas, A. Said. International Workshop on Benchmarking Adaptive Retrieval and Recommender Systems (BARS 2013) at the 36th ACM Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2013).
- X. Amatriain, P. Castells, A. de Vries, C. Posse, H. Steck. International Workshop on Recommendation Utility Evaluation (RUE 2012) at the 6th ACM Conference on Recommender Systems (RecSys 2012). Dublin, Irland, September 2012.
- P. Castells, J. Wang, R. Lara, D. Zhang. International Workshop on Novelty and Diversity in Recommender Systems (DiveRS 2011) at the 5th ACM Conference on Recommender Systems (RecSys 2011). Chicago, IL, USA, October 2011.
- J. Picault, D. Kostadinov, P. Castells, A. Jaimes. Workshop on the Practical Use of Recommender Systems, Algorithms, and Technology (PRSAT 2010) at the 4th ACM Conference on Recommender Systems (RecSys 2010). Barcelona, Spain, September 2010.

Tutorial Co-organizer

- P. Castells. Recommender Systems Evaluation Beyond Accuracy. ACM Latin American School on Recommender Systems (LARS 2019). Fortaleza, Brazil, October 2019.
- R. L. T. Santos, P. Castells, İ. S. Altingovde, F. Can. Tutorial on Diversity and Novelty on the Web: Search, Recommendation, and Data Streaming Aspects at the 24th International Conference on World Wide Web (WWW 2015). Florence, Italy, May 2015.
- R. L. T. Santos, P. Castells, İ. S. Altingovde, F. Can. Tutorial on Diversity and Novelty in Web Search, Recommender Systems and Data Streams at the 7th ACM International Conference on Web Search and Data Mining (WSDM 2014). New York, NY, USA, February 2014.
- R. L. T. Santos, P. Castells, İ. S. Altingovde, F. Can. Tutorial on Diversity and Novelty in Information Retrieval at the 36th ACM Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2013). Dublin, Ireland, July 2013.

Other appointments

- Doctoral Consortium co-chair, 15th ACM Conference on Recommender Systems (RecSys 2021). Amsterdam, Netherlands, September 2021.
- Workshops co-chair, 14th ACM Conference on Recommender Systems (RecSys 2020). Virtual Event, Brazil, September 2020.
- Poster and demo chair, 9th ACM Conference on Recommender Systems (RecSys 2015). Vienna, Austria, September 2015.
- Senior program committee member of ACM SIGIR, ACM RecSys, The Web Conference, ECIR, IJCAI, ECAI.

Editorial Board Member

- Information Retrieval, since July 2020.

Associate Editor

- IEEE Transactions on Data and Knowledge Engineering, since March 2021.
- ACM Transactions on Recommender Systems, since January 2022.

Guest Editor

- P. Castells, J. Wang, R. Lara, D. Zhang (Eds.). Special Section on "Diversity and Discovery in Recommender Systems and Exploratory Search". ACM Transactions on Intelligent Systems and Technology 5(4), January 2015.
- J. M. Fernández Luna, J. Huete, P. Castells (Eds.). Special issue on "Personalization and Recommendation in Information Access". Information Processing & Management 49(3), May 2013.
- P. Mylonas, H. Hellwagner, P. Castells, M. Wallace (Eds.). Special issue on "Multimedia Semantics, Adaptation and Personalization". Signal, Image and Video Processing, October 2008.

Journals

1. E. Mena-Maldonado, R. Cañamares, P. Castells, Y. Ren, M. Sanderson. Popularity Bias in False-Positive Metrics for Recommender Systems Evaluation. ACM Transactions on Information Systems 39(3), May 2021.
2. R. Cañamares, P. Castells, A. Moffat. Offline Evaluation Options for Recommender Systems. Information Retrieval 23(4), August 2020, pp 387-410.
3. D. Valcarce, A. Bellogín, J. Parapar, P. Castells. Assessing ranking metrics in top-N recommendation. Information Retrieval 23(4), August 2020, pp. 411-448.
4. J. Sanz-Cruzado, P. Castells, C. Macdonald, I. Ounis. Effective Contact Recommendation in Social Networks by Adaptation of Information Retrieval Models. Information Processing & Management 57(5), September 2020.
5. A. Bellogín, P. Castells, I. Cantador. Statistical Biases in Information Retrieval Metrics for Recommender Systems. Information Retrieval 20(6), July 2017, pp. 606-634.
6. A. Bellogín, P. Castells, I. Cantador. Neighbor Selection and Weighting in User-Based Collaborative Filtering: A Performance Prediction Approach. ACM Transactions on the Web 8(2), March 2014.
7. A. Bellogín, J. Wang, P. Castells. Bridging Memory-Based Collaborative Filtering and Text Retrieval. Information Retrieval 16(6), December 2013, pp. 697-724.

8. J. Parapar, A. Bellogín, P. Castells, A. Barreiro. Relevance-Based Language Modelling for Recommender Systems. Information Processing & Management 49(4), July 2013.

9. A. Bellogín, I. Cantador, F. Díez, P. Castells, E. Chavarriaga. An Empirical Comparison of Social, Collaborative Filtering, and Hybrid Recommenders. ACM Transactions on Intelligent Systems and Technology 4(1), special issue on Context-Aware Movie Recommendations, February 2013.

10. A. Bellogín, I. Cantador, P. Castells. A Comparative Study of Heterogeneous Item Recommendations in Social Systems. Information Sciences 221(1), February 2013, pp. 142-169.

11. M. Fernández, I. Cantador, V. López, D. Vallet, P. Castells, E. Motta. Semantically enhanced Information Retrieval: an ontology-based approach. Journal of Web Semantics 9(4), special issue on Semantic Search, December 2011, pp. 434-452.

12. I. Cantador, P. Castells. Extracting Multilayered Communities of Interest from Semantic User Profiles: Application to Group Modeling and Hybrid Recommendations. Computers in Human Behavior 27(4), special issue on Social and Humanistic Computing for the Knowledge Society, July 2011, pp. 1321-1336.

13. D. Vallet, F. Hopfgartner, J. M. Jose, P. Castells. Effects of Usage-Based Feedback on Video Retrieval: A Simulation-Based Study. ACM Transactions on Information Systems 29(2), April 2011.

14. I. Cantador, P. Castells, A. Bellogín. An Enhanced Semantic Layer for Hybrid Recommender Systems: Application to News Recommendation. International Journal on Semantic Web and Information Systems 7(1), 2011, pp. 44-78.

15. Ph. Mylonas, D. Vallet, P. Castells, M. Fernández, and Y. Avrithis. Personalized information retrieval based on context and ontological knowledge. Knowledge Engineering Review 23(1), special issue on Contexts and Ontologies, March 2008, pp. 73-100.

16. R. Lara, M. Corella, P. Castells. A flexible model for the location of services. International Journal of Electronic Commerce 12(2), special issue on Semantic Matchmaking and Resource Retrieval, January 2008, pp. 11-40.

17. I. Cantador, A. Bellogín, P. Castells. A Multilayer Ontology-based Hybrid Recommendation Model. AI Communications 21(2-3), special issue on Recommender Systems, April 2008, pp. 203-210.

18. J. A. Macías, P. Castells. Providing end-user facilities to simplify ontology-driven web application authoring. Interacting with Computers 19(4), July 2007, pp. 563-585.

19. M. Ruiz-Casado, E. Alfonseca, P. Castells. Automatising the Learning of Lexical Patterns: an Application to the Enrichment of WordNet by Extracting Semantic Relationships from Wikipedia. Data and Knowledge Engineering 61(3), June 2007, pp. 484-499.

20. D. Vallet, P. Castells, M. Fernández, P. Mylonas, Y. Avrithis. Personalized Content Retrieval in Context Using Ontological Knowledge. IEEE Transactions on Circuits and Systems for Video Technology 17(3), special issue on the convergence of knowledge engineering, semantics and signal processing in audiovisual information retrieval, March 2007, pp. 336-346.

21. P. Castells, M. Fernández, D. Vallet. An Adaptation of the Vector-Space Model for Ontology-Based Information Retrieval. IEEE Transactions on Knowledge and Data Engineering 19(2), special issue on Knowledge and Data Engineering in the Semantic Web Era, February 2007, pp. 261-272.

Conferences

1. R. Cañamares, P. Castells. On Target Item Sampling in Offline Recommender System Evaluation. 14th ACM Conference on Recommender Systems (RecSys 2020). Virtual Event, Brazil, September 2020, pp. 259–268.

2. E. Mena-Maldonado, R. Cañamares, P. Castells, Y. Ren, M. Sanderson. Agreement and Disagreement between True and False-Positive Metrics in Recommender Systems Evaluation. 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2020). Virtual Event, China, July 2020, pp. 841-850.

3. J. Sanz-Cruzado, C. Macdonald, I. Ounis, Pablo Castells. Axiomatic Analysis of Contact Recommendation Methods in Social Networks: an IR perspective. 42th European Conference on Information Retrieval (ECIR 2020). Lisbon, Portugal, April 2020, pp. 175-90.

4. J. Sanz-Cruzado, P. Castells, E. López. A Simple Multi-Armed Nearest-Neighbor Bandit for Interactive Recommendation. 13th ACM Conference on Recommender Systems (RecSys 2019). Copenhagen, Denmark, September 2019, pp. 358-362.

5. R. Cañamares, M. Redondo, P. Castells. Multi-Armed Recommender System Bandit Ensembles. 13th ACM Conference on Recommender Systems (RecSys 2019). Copenhagen, Denmark, September 2019, pp. 432-436.

6. J. Sanz-Cruzado, P. Castells. Information Retrieval Models for Contact Recommendation in Social Networks. 41st European Conference on Information Retrieval (ECIR 2019). Cologne, Germany, April 2019, pp. 148-163.

7. J. Sanz-Cruzado, P. Castells. Enhancing Structural Diversity in Social Networks by Recommending Weak Ties. 12th ACM Conference on Recommender Systems (RecSys 2018). Vancouver, Canada, October 2018, pp. 233-241.

8. D. Valcarce, A. Bellogín, J. Parapar, P. Castells. On the Robustness and Discriminative Power of IR Metrics for Top-N Recommendation. 12th ACM Conference on Recommender Systems (RecSys 2018). Vancouver, Canada, October 2018, pp. 260-268.

9. R. Cañamares, P. Castells. Should I Follow the Crowd? A Probabilistic Analysis of the Effectiveness of Popularity in Recommender Systems. 41st Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2018). Ann Arbor, Michigan, USA, July 2018, pp. 415-424.

10. R. Cañamares, P. Castells. From the PRP to the Low Prior Discovery Recall Principle for Recommender Systems. 41st Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2018). Ann Arbor, Michigan, USA. July 2018, pp. 1081-1084.

11. S. Vargas, L. Baltrunas, A. Karatzoglou, P. Castells. Coverage, Redundancy and Size-Awareness in Genre Diversity for Recommender Systems. 8th ACM Conference on Recommender Systems (RecSys 2014). Foster City, CA, USA, October 2014, pp. 209-216.

12. S. Vargas, P. Castells. Improving Sales Diversity by Recommending Users to Items. 8th ACM Conference on Recommender Systems (RecSys 2014). Foster City, CA, USA, October 2014, pp. 145-152.

13. A. Bellogín, J. Parapar, P. Castells. Probabilistic Collaborative Filtering with Negative Cross Entropy. 7th ACM Conference on Recommender Systems (RecSys 2013). Hong Kong, China, October 2013, pp. 387-390.

14. S. Vargas, P. Castells. Exploiting the Diversity of User Preferences for Recommendation. 10th International Conference in the RIAO series (OAIR 2013). Lisbon, Portugal, May 2013.

15. S. Vargas, P. Castells, D. Vallet. Explicit Relevance Models in Intent-Oriented Information Retrieval Diversification. 35th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2012). Portland, OR, USA, August 2012, pp. 75-84.

16. D. Vallet, P. Castells. Personalized Diversification of Search Results. 35th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2012). Portland, OR, USA, August 2012, pp. 841-850.

17. A. Bellogín, P. Castells, I. Cantador. Precision-Oriented Evaluation of Recommender Systems: An Algorithmic Comparison. 5th ACM Conference on Recommender Systems (RecSys 2011). Chicago, Illinois, October 2011, pp. 333-336.

18. S. Vargas, P. Castells. Rank and Relevance in Novelty and Diversity Metrics for Recommender Systems. 5th ACM Conference on Recommender Systems (RecSys 2011). Chicago, Illinois, October 2011, pp. 109-116.

19. A. Bellogín, J. Wang, P. Castells. Structured Collaborative Filtering. 20th ACM International Conference on Information and Knowledge Management (CIKM 2011), Poster Session. Glasgow, UK, October 2011, pp. 2257-2260.

20. A. Bellogín, P. Castells, I. Cantador. Predicting the Performance of Recommender Systems: An Information Theoretic Approach. 3rd International Conference on the Theory of Information Retrieval (ICTIR 2011). Bertinoro, Italy, September 2011, pp. 27-39.

21. S. Vargas, P. Castells, D. Vallet. Intent-Oriented Diversity in Recommender Systems. 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2011), Poster Session. Beijing, China, July 2011, pp. 1211-1212.

22. D. Vallet, P. Castells. On Diversifying and Personalizing Web Search. 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2011), Poster Session. Beijing, China, July 2011, pp. 1157-1158.

23. A. Bellogín, P. Castells, I. Cantador. Self-adjusting Hybrid Recommenders Based on Social Network Analysis. 34th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2011), Poster Session. Beijing, China, July 2011, pp. 1147-1148.

24. A. Bellogín, J. Wang, P. Castells. Text Retrieval Methods for Item Ranking in Collaborative Filtering. 33rd European Conference on Information Retrieval (ECIR 2011). Dublin, Ireland, April 2011, pp. 301-306.

25. A. Bellogín, P. Castells. A Performance Prediction Approach to Enhance Collaborative Filtering Performance. 32nd European Conference on Information Retrieval (ECIR 2010). Milton Keynes, UK, May 2010, pp. 382-393.

26. A. Bellogín, P. Castells. Predicting Neighbor Goodness in Collaborative Filtering. 8th International Conference on Flexible Query Answering Systems (FQAS 2009). Roskilde, Denmark, October 2009, pp. 605-616.

27. I. Cantador, A. Bellogín, P. Castells. Ontology-based Personalised and Context-aware Recommendations of News Items. IEEE/WIC/ACM International Conference on Web Intelligence (WI 2008). Sydney, Australia, December 2008.

28. M. Fernández, V. López, M. Sabou, V. Uren, D. Vallet, E. Motta, P. Castells. Semantic Search meets the Web. 2nd IEEE International Conference on Semantic Computing (ICSC 2008). Santa Clara, CA, USA, August 2008.

29. I. Cantador, A. Bellogín, P. Castells. News@hand: A Semantic Web Approach to Recommending News. 5th International Conference on Adaptative Hypermedia (AH 2008). Hannover, Germany, July 2008, pp. 279-283.

30. I. Cantador, P. Castells. Multilayered Semantic Social Network Modeling by Ontology-Based User Profiles Clustering: Application to Collaborative Filtering. 15th International Conference on Knowledge Engineering and Knowledge Management (EKAW 2006). Podebrady, Czech Republic, October 2006, pp. 334-349.

31. M. A. Corella, P. Castells. A Heuristic Approach to Semantic Web Services Classification. 10th International Conference on Knowledge-Based & Intelligent Information & Engineering Systems (KES 2006). Bournemouth, UK, October 2006, pp. 598-605.

32. M. Fernández, D. Vallet, P. Castells. Using Historical Data to Enhance Rank Aggregation. 29th Annual International ACM Conference on Research and Development in Information Retrieval (SIGIR 2006), Poster Session. Seattle, WA, USA, August 2006, pp. 643-644.

33. A. Evans, M. Fernández, D. Vallet, P. Castells. Adaptive Multimedia Access: From User Needs to Semantic Personalisation. IEEE International Symposium on Circuits and Systems (ISCAS 2006). Kos, Greece, May 2006.

34. M. Fernández, D. Vallet, P. Castells. Probabilistic Score Normalization for Rank Aggregation. 28th European Conference on Information Retrieval (ECIR 2006). London, UK, April 2006, pp. 553-556.

35. J. M. Fuentes, M. A. Corella, P. Castells, M. Rico. Semi-automatic Web Service Generation. IADIS WWW/Internet Conference (ICWI 2005). Lisbon, Portugal, October 2005, pp. 3-10.

36. D. Vallet, P. Mylonas, M. A. Corella, J. M. Fuentes, P. Castells, Y. Avrithis. A Semantically-Enhanced Personalization Framework for Knowledge-Driven Media Services. IADIS WWW/Internet 2005 Conference (ICWI 2005). Lisbon, Portugal, October 2005, pp. 11-18.

37. M. Ruiz-Casado, E. Alfonseca, P. Castells. Using Context-window Overlapping in Synonym Discovery and Ontology Extension. International Conference on Recent Advances in Natural Language Processing (RANLP 2005). Borovets, Bulgaria, September 2005.

38. M. Ruiz-Casado, E. Alfonseca, P. Castells. Automatic Assignment of Wikipedia Encyclopedic Entries to WordNet Synsets. 3rd Atlantic Web Intelligence Conference (AWIC 2005). Lodz, Poland, June 2005, pp. 380-386.

39. M. Ruiz-Casado, E. Alfonseca, P. Castells. Automatic Extraction of Semantic Relationships for WordNet by means of Pattern Learning from Wikipedia. 10th International Conference on Application of Natural Language to Information Systems (NLDB 2005). Alicante, Spain, June 2005, pp. 67-79.

40. D. Vallet, M. Fernández, P. Castells. An Ontology-Based Information Retrieval Model. 2nd European Semantic Web Conference (ESWC 2005). Heraklion, Greece, May 2005, pp. 455-470.

41. P. Castells, F. Perdrix, E. Pulido, M. Rico, R. Benjamins, J. Contreras, J. Lorés. Neptuno: Semantic Web Technologies for a Digital Newspaper Archive. 1st European Semantic Web Symposium (ESWS 2004). Heraklion, Greece, May 2004, pp. 445-458.

42. P. Castells, B. Foncillas, R. Lara, M. Rico, J. L. Alonso. Semantic Web Technologies for Economic and Financial Information Management. 1st European Semantic Web Symposium (ESWS 2004). Heraklion, Greece, May 2004, pp. 473-487.

Book Chapters

1. J. Sanz-Cruzado, P. Castells. Contact Recommendations in Social Networks. In S. Berkovsky, I. Cantador, D. Tikk (Eds.): Collaborative Recommendations: Algorithms, Practical Challenges and Applications. World Scientific Publishing, November 2018, pp. 519-569.

2. P. Castells, N. J. Hurley, S. Vargas. Novelty and Diversity in Recommender Systems. In Francesco Ricci, Lior Rokach, Bracha Shapira (Eds.): Recommender Systems Handbook, 2nd edition. Springer, 2015, pp. 881-918.

3. I. Cantador, P. Castells. Group Recommender Systems: New Perspectives in the Social Web. In J. J. Pazos Arias, A. Fernández Vilas, R. P. Díaz Redondo (Eds.): Recommender Systems for the Social Web. Springer Verlag, 2012, pp. 139-157.

4. A. Bellogín, I. Cantador, P. Castells, Á. Ortigosa. Discerning Relevant Model Features in a Content-based Collaborative Recommender System. In J. Fürnkranz, E. Hüllermeier (Eds.): Preference Learning. Springer Verlag, 2011, pp. 429-456.

5. C. Dolbear, P. Hobson, D. Vallet, M. Fernández, I. Cantador, P. Castells. Personalised Multimedia Summaries. In Y. Kompatsiaris, P. Hobson (Eds.): Semantic Multimedia and Ontologies. Springer Verlag, March 2008, pp. 165-184.

6. I. Cantador, M. Fernández, D. Vallet, P. Castells, J. Picault, M. Ribière. A Multi-Purpose Ontology-Based Approach for Personalised Content Filtering and Retrieval. In M. Wallace, M. Angelides, Ph. Mylonas (Eds.): Advances in Semantic Media Adaptation and Personalization. Springer Verlag, February 2008, pp. 25-52.

7. R. Lara, I. Cantador, P. Castells. Semantic Web Technologies for the Financial Domain. In J. Cardoso, M. Hepp, M. D. Lytras (Eds.): Real-world Applications of Semantic Web Technology and Ontologies. Springer Verlag, 2007, pp. 41-74.

Workshops

1. J. Sanz-Cruzado, P. Castells. Beyond Accuracy in Link Prediction. 3rd Workshop on Social Media for Personalization And Search (SoMePeAS 2019) at the 41st European Conference on Information Retrieval (ECIR 2019). Cologne, Germany, April 2019.

2. P. Castells, R. Cañamares. Characterization of Fair Experiments for Recommender System Evaluation – A Formal Analysis. Workshop on Offline Evaluation for Recommender Systems (REVEAL 2018) at the 12th ACM Conference on Recommender Systems (RecSys 2018). Vancouver, Canada, October 2018.

3. J. Sanz-Cruzado, S. M. Pepa, P. Castells. Structural Novelty and Diversity in Link Prediction. 9th International Workshop on Modeling Social Media (MSM 2018) at The Web Conference (TheWebConf 2018). Lyon, France, April 2018.

4. R. Cañamares, P. Castells. On the Optimal Non-Personalized Recommendation: From the PRP to the Discovery False Negative Principle. ACM SIGIR 2017 Workshop on Axiomatic Thinking for Information Retrieval and Related Tasks (ATIR 2017). Tokyo, Japan, August 2017.

5. R. Cañamares, P. Castells. A Probabilistic Reformulation of Memory-Based Collaborative Filtering – Implications on Popularity Biases. 40th Annual International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2017). Tokyo, Japan, August 2017, pp. 215-224.

6. R. Cañamares, P. Castells. Exploring social network effects on popularity biases in recommender systems. 6th Workshop on Recommender Systems and the Social Web (RSWeb 2014) at the 8th ACM Conference on Recommender Systems (RecSys 2014). Foster City, CA, USA, October 2014.

7. A. Bellogín, I. Cantador, P. Castells, F. Díez. Exploiting Social Networks in Recommendation: a Multi-Domain Comparison. 13th Dutch-Belgian Information Retrieval Workshop (DIR 2013). Delft, Netherlands, April 2013.

8. S. Vargas, P. Castells, D. Vallet. On the Suitability of Intent Spaces for IR Diversification. International Workshop on Diversity in Document Retrieval (DDR 2012) at the 5th ACM International Conference on Web Search and Data Mining (WSDM 2012). Seattle, Washington, USA, February 2012.

9. D. Vallet, M. Halvey, J. Jose, P. Castells. Applying Soft Links to Diversify Video Recommendations. 9th International Workshop on Content-Based Multimedia Indexing (CBMI 2011). Madrid, Spain, June 2011.

10. P. Castells, S. Vargas, J. Wang. Novelty and Diversity Metrics for Recommender Systems: Choice, Discovery and Relevance. International Workshop on Diversity in Document Retrieval (DDR 2011) at the 33rd European Conference on Information Retrieval (ECIR 2011). Dublin, Ireland, April 2011.

1. Elisa K. Mena-Maldonado. *Evaluation biases in recommender systems and information retrieval.* RMIT University, Melbourne, Australia, *ongoing.* Co-supervised with Mark Sanderson and Yongli Ren.

2. Javier Sanz-Cruzado. *Contact recommendation in social networks: algorithmic models, diversity and network evolution.* Universidad Autónoma de Madrid, May 2021.

3. Rocío Cañamares. *An analysis of popularity biases in recommender system evaluation and algorithms.* Universidad Autónoma de Madrid, October 2019.

4. Saúl Vargas. *Novelty and diversity evaluation and enhancement in recommender systems.* Universidad Autónoma de Madrid, April 2015.

5. Alejandro Bellogín. *Performance prediction and evaluation in Recommender Systems: an Information Retrieval perspective.* Universidad Autónoma de Madrid, November 2012. Co-supervised with Iván Cantador.

6. María Ruiz. *Natural language processing for semiautomatic semantics extraction: encyclopedic entry disambiguation and relationship extraction using Wikipedia and WordNet.* Universidad Autónoma de Madrid, October 2009.

7. Miriam Fernández. *Semantically enhanced Information Retrieval: an ontology-based approach.* Universidad Autónoma de Madrid, April 2009.

8. Iván Cantador. *Exploiting the conceptual space in hybrid recommender systems: a semantic-based approach.* Universidad Autónoma de Madrid, November 2008.

9. David J. Vallet. *Personalized information retrieval in context by exploiting semantic knowledge and implicit user feedback.* Universidad Autónoma de Madrid, September 2008.

10. Rubén Lara. *A Flexible Model for the Semi-automatic Location of Services.* Universidad Autónoma de Madrid, October 2007.

11. Daniel Olmedilla. *Realizing interoperability of e-learning repositories.* Universidad Autónoma de Madrid, May 2007.

12. José A. Macías. *Autoría de documentos web dinámicos mediante ontologías y técnicas de programación por demostración.* Universidad Autónoma de Madrid, September 2003.

European Projects

- MUMIA, (COST IC1002), 2010 – 2014: Multilingual and multifaceted interactive information access.

- MESH (FP6-027685), 2006 – 2009: Multimedia semantic syndication for enhanced news services. Principal Investigator of UAM team. Integrated project with 7 industrial partners and 5 academic partners.

- aceMedia (FP6-001765), 2004 – 2007: Integrating knowledge, semantics and content for user-centred intelligent media services. Integrated project with 9 industrial partners and 5 academic partners.

National Projects

- Principal Investigator of 6 projects in collaboration with industrial partners since 2005.

- Principal Investigator of 6 research projects in the main national funding program since 2005.

INVITED TALKS

- *Rational and irrational bias in search and recommendation.* Amazon, online, September 2021.
- *Rational and irrational bias in recommendation.* RMIT University, online, June 2021.
- *Bias in recommendation: avoid it or embrace it?* Workshop on Fairness and Bias in Information Retrieval, University of Glasgow, online, March 2021.
- *Offline recommender system evaluation: design options and biases.* Farfetch, online, February 2021.
- *Bias in recommendation: avoid it or embrace it?* Amazon, Barcelona, Spain, February 2020.
- *Recommender systems evaluation beyond accuracy.* ACM Latin American School on Recommender Systems (LARS 2019), Fortaleza, Brazil, October 2019.
- *Popularity in recommender systems: interaction bias and fair evaluation.* University of Glasgow, UK, February 2019.
- *The role of popularity in recommender systems.* UNED, Madrid, Spain, June 2018.
- *Formal analysis of the recommendation task.* UNED, Madrid, Spain, July 2017.
- *Novelty and diversity in recommender systems: towards a unified perspective.* University of A Coruña, July 2013.
- *Novelty and diversity in information search and retrieval.* Polytechnical University of Valencia, May 2013.
- *IR diversity and personalization: two sides of the same coin?* University of Glasgow, UK, October 2012.
- *Novelty and diversity in information access.* UNED, Madrid, Spain, June 2012.

OTHER SERVICE

Vice-head of Computer Science Department, Universidad Autónoma de Madrid, 2010 – 2014.

Vice-dean of Studies, Escuela Politécnica Superior, Universidad Autónoma de Madrid, 2004 – 2008.

Adjunct to the area coordinator of Computer Science in the Spanish national research evaluation agency (ANEP), 2006 – 2009.

Panel member of Spanish national research program evaluation in 2010, 2012 and 2015.