



# Pablo Sánchez Pérez

COMPUTER SCIENTIST · PHD IN COMPUTER SCIENCE AND TELECOMMUNICATIONS ENGINEERING.

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## Work experience

### Universidad Pontificia Comillas

ASSISTANT PROFESSOR

- Main task: teaching Python programming, operating systems, algorithms and data structures and databases.

Madrid, Spain

August 2022 - Today

### Universidad Autónoma de Madrid

POSTDOCTORAL RESEARCHER

- Main task: research in recommender systems (especially in Point-Of-Interest recommendation).

Madrid, Spain

July 2021 - August 2022

### Universidad Autónoma de Madrid

PREDOCTORAL RESEARCHER

- Main task: use of contextual dimensions such as sequentiality and time in recommender systems (mainly in neighborhood-based algorithms).

Madrid, Spain

July 2018 - July 2021

### Universidad Autónoma de Madrid

RESEARCHER INTERN IN THE INFORMATION RETRIEVAL GROUP

- Research and development of different recommender systems while studying the master's degree.

Madrid, Spain

September 2016 - July 2017

### Universidad Autónoma de Madrid

WEB PROGRAMMER AND DATABASE DESIGN AND MANAGEMENT

- Development of the Escuela Politécnica Superior's website and database (faculty of the Universidad Autónoma de Madrid).

Madrid, Spain

September 2015 - July 2016

## Education

### Universidad Autónoma de Madrid

PHD IN COMPUTER SCIENCE AND TELECOMMUNICATION ENGINEERING

- Grade: Distinction Cum Laude in the thesis titled: **Exploring attributes, sequences, and time in Recommender Systems: From classical to Point-of-Interest recommendation.**

Madrid, Spain

October 2017 - July 2021

### Universidad Autónoma de Madrid

MASTER IN RESEARCH AND INNOVATION IN INFORMATION AND TELECOMMUNICATION TECHNOLOGIES

- Average grade: 9,05/10.
- High honours in the final Master's thesis titled: **Exploiting Subsequence Matching in Recommender Systems.**

Madrid, Spain

September 2016 - July 2017

### Universidad Autónoma de Madrid

GRADE ON COMPUTER SCIENCE.

- Average grade: 7,83/10.
- High honours in the final degree project titled: **Study And Applications of Algorithms and Data Structures in Recommender Systems.**

Madrid, Spain

September 2011 - June 2016

## Research activities

### RESEARCH AREAS

- Recommender Systems, Ranking Evaluation, Information Retrieval.

### PARTICIPATION IN RESEARCH PROJECTS

#### Project: Mas allá de la recomendación estática: equidad, interacción y transparencia

Universidad Autónoma de Madrid

RESEARCHER

July 2020 - May 2023

Participation in the project while finishing the thesis and in the postdoctoral phase defining new mechanisms to measure fairness in the recommendations and partially mitigate the possible injustices and biases that may exist in them.

#### Project: Recomendación en Medios Sociales: Contexto, Diversidad y Sesgo Algorítmico

Universidad Autónoma de Madrid

PREDOCTORAL RESEARCHER

July 2017 - December 2019

Participation in the project while conducting my PhD analyzing biases in recommender systems and defining new mechanisms to incorporate temporal and sequential influence in the recommendations. I also used contextual information to define new metrics to measure the performance of the algorithms in terms of relevance, sequential relevance and temporal novelty.

#### Project: MyStreetBook

Universidad Autónoma de Madrid

COLLABORATOR

March 2017 - July 2017

Algorithm design to generate personalized tourist routes for users of the MyStreetBook application.

## ATTENDANCE AND PAPERS PRESENTATION AT CONFERENCES

2022	<b>Attendee and lecturer</b> , ACM Conference on User Modeling, Adaptation and Personalization (UMAP 2022). 4 - 7 July 2022.	Barcelona
2019	<b>Attendee and lecturer</b> , ACM Conference on Recommender Systems (RecSys 2019). 16 - 20 September 2019.	Denmark
2018	<b>Attendee and lecturer</b> , ACM Conference on Recommender Systems (RecSys 2018). 2 - 7 October 2018.	Canada
2018	<b>Attendee and lecturer</b> , Spanish Conference on Information Retrieval (CERI 2018). 25 - 27 June 2018.	Spain
2018	<b>Attendee and lecturer</b> , European Conference on Information Retrieval (ECIR 2018). 26 - 29 Mars 2018.	France

## PROGRAM COMMITTEE & REVIEWER IN CONFERENCES/WORKSHOPS

2023	<b>PC member</b> , ACM Conference on Recommender Systems - RecSys 2023- .	Singapore
2022	<b>Web Chair</b> , 33rd ACM Conference on Hypertext and Social Media - HT' 2022.	Spain
2021	<b>PC member</b> , 3rd Workshop on Knowledge aware and Conversational Recommender Systems - KaRS 2021.	Netherlands
2021	<b>PC member</b> , ACM RecSys Workshop on Recommenders in Tourism - RecTour 2021.	Netherlands
2021	<b>PC member</b> , ACM Conference on Recommender Systems - RecSys 2021- . Reproducibility Track.	Netherlands
2020	<b>PC member</b> , ACM Conference on Recommender Systems - RecSys 2020 - . Reproducibility Track.	Rio de Janeiro
2019	<b>PC member</b> , 2nd Workshop on Knowledge aware and Conversational Recommender Systems - KaRS 2019.	China

## REVIEWER IN JOURNALS

- Information Processing and Management.
- Information Technology & Tourism.
- International Journal of Data Science and Analytics.
- Geocarto International.
- User Modeling and User-Adapted Interaction.

## Publications

- Since 2016 I have published a total of **20** papers. All of them can be found in my Google Scholar web page. The code (in Java) to replicate the results of the articles is available in my Bitbucket profile: <https://bitbucket.org/PabloSanchezP/>.

## JOURNALS

<b>Bias characterization, assessment, and mitigation in location-based recommender systems</b>	<i>Data Mining and Knowledge Discovery</i>
<u>PABLO SÁNCHEZ, ALEJANDRO BELLOGÍN, AND LUDOVICO BORATTO. DOI: 10.1145/3510409.</u>	2023
• JCR Impact factor 2021: <u>5.406, 36/164 (Information Systems: Q1), 41/145 (Artificial Intelligence: Q2).</u>	
<b>Point-of-Interest Recommender Systems based on Location-Based Social Networks: A Survey from an Experimental Perspective</b>	<i>ACM Computing Surveys</i>
<u>PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1145/3510409.</u>	2022
• JCR Impact factor 2020: <u>10.282. Q1: 4/110. Computer Science, Theory &amp; Methods.</u>	
<b>On the effects of aggregation strategies for different groups of users in venue recommendation</b>	<i>Information Processing and Management</i>
<u>PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1016/J.IPM.2021.102609.</u>	2021
• JCR Impact factor 2020: <u>6.222. Q1: 21/162. Computer Science, Information Systems.</u>	
<b>Time and sequence awareness in similarity metrics for recommendation</b>	<i>Information Processing and Management</i>
<u>PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1016/J.IPM.2020.102228.</u>	2020
• JCR Impact factor 2020: <u>6.222. Q1: 21/162. Computer Science, Information Systems.</u>	
<b>Applying reranking strategies to route recommendation using sequence-aware evaluation</b>	<i>User Modeling and User-Adapted Interaction</i>
<u>PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1007/S11257-020-09258-4.</u>	2020
• JCR Impact factor 2020: <u>4.412. Q1: 5/23 Computer Science and Cybernetics.</u>	
<b>Building user profiles based on sequences for content and collaborative filtering</b>	<i>Information Processing and Management</i>
<u>PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1016/J.IPM.2018.10.003.</u>	2019
• JCR Impact factor 2019: <u>4.787. Q1: 22/156. Computer Science, Information Systems.</u>	
<b>Collaborative filtering based on subsequence matching: A new approach</b>	<i>Information Sciences</i>
<u>ALEJANDRO BELLOGÍN AND PABLO SÁNCHEZ. DOI: 10.1016/J.INS.2017.08.016.</u>	2017
• JCR Impact factor 2017: <u>4.305. Q1: 12/148. Computer Science, Information Systems.</u>	

**Travelers vs. Locals: The Effect of Cluster Analysis in Point-of-Interest Recommendation**

PABLO SÁNCHEZ AND LINUS W. DIETZ. DOI: 10.1145/3503252.3531320.

- CORE 2021: [rank B](#).
- GGS 2021: [class 3, rating B](#).

*ACM Conference on User Modeling, Adaptation and Personalization (UMAP)*

2022

**Discovering Related Users in Location-based Social Networks**

SERGIO TORRIJOS, ALEJANDRO BELLOGÍN AND PABLO SÁNCHEZ. DOI: 10.1145/3340631.3394882.

- CORE 2020: [rank B](#).
- GGS 2018: [class 3, rating B](#).

*ACM Conference on User Modeling, Adaptation and Personalization (UMAP)*

2020

**Attribute-based evaluation for recommender systems: incorporating user and item attributes in evaluation metrics**

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1145/3298689.3347049.

- CORE 2018: [rank B](#).
- GGS 2018: [class 2, rating A-](#).

*ACM Conference on Recommender Systems (RecSys)*

2019

**Exploiting contextual information for recommender systems oriented to tourism**

PABLO SÁNCHEZ. DOI: 10.1145/3298689.3347062.

- CORE 2018: [rank B](#).
- GGS 2018: [class 2, rating A-](#).

*ACM Conference on Recommender Systems (RecSys)*

2019

**Time-Aware Novelty Metrics for Recommender Systems**

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1007/978-3-319-76941-7\_27.

- CORE 2018: [rank A](#).
- GGS 2018: [class 2, rating A-](#).

*European Conference on Information Retrieval (ECIR)*

2018

**Measuring anti-relevance: a study on when recommendation algorithms produce bad suggestions**

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1145/3240323.3240382.

- CORE 2018: [rank B](#).
- GGS 2018: [class 2, rating A-](#).

*ACM Conference on Recommender Systems (RecSys)*

2018

**New approaches for evaluation: correctness and freshness: Extended abstract**

PABLO SÁNCHEZ, RUS M. MESAS AND ALEJANDRO BELLOGÍN. DOI: 10.1145/3230599.3230614.

*Spanish Conference on Information Retrieval (CERI)*

2018

**Applying subsequence matching to collaborative filtering: Extended abstract**

ALEJANDRO BELLOGÍN AND PABLO SÁNCHEZ. DOI: 10.1145/3230599.3230605.

*Spanish Conference on Information Retrieval (CERI)*

2018

**Studying the effect of data structures on the efficiency of collaborative filtering systems**

PABLO SÁNCHEZ, ALEJANDRO BELLOGÍN, AND IVÁN CANTADOR. DOI: 10.1145/2934732.2934747.

*Spanish Conference on Information Retrieval (CERI)*

2016

WORKSHOPS

**Challenges on evaluating venue recommendation approaches: Position paper**

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. LINK.

*Workshop on Recommenders in Tourism (RecTour)*

2018

**A novel approach for venue recommendation using cross-domain techniques**

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. LINK.

*Workshop on Intelligent Recommender Systems by Knowledge Transfer & Learning (RecSysKTL)*

2018

**Revisiting neighbourhood-based recommenders for temporal scenarios**

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. LINK.

*Workshop on Temporal Reasoning in Recommender Systems (RecTemp)*

2017

## Technical skills

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<b>Programming languages</b>	Java (High level), Python, Bash, C, SQL (Medium level). Ease of learning any programming language.
<b>Software development</b>	Eclipse, Pycharm, NetBeans, Visual Studio, PostgreSQL, SQLServer.
<b>Operating Systems</b>	Microsoft Windows, GNU/Linux.
<b>Other software</b>	LaTeX, Microsoft Office, Libre Office.
<b>Other skills</b>	Responsability, Commitment, Empathy, Motivation to learn, Organized.

## Languages

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<b>Spanish</b>	Native
<b>English</b>	Reading: High. Writing: Medium-High. Speaking: Medium-High. Certificate: First Certificate in English University of Cambridge.

## University Teaching

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<b>Subject: Databases</b>	<i>Universidad Pontificia Comillas</i>
LAB AND THEORY PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE	<i>January - April</i>
Relational and non-relational databases. Relational model, SQL, MongoDB and Neo4J. 2nd year of Degree in Mathematical Engineering and Artificial Intelligence. 1 academic course (2023).	
<b>Subject: Algorithms and Data Structures</b>	<i>Universidad Pontificia Comillas</i>
LAB PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE	<i>January - April</i>
Teaching Python language, data structures and algorithms. 1st year of the Degree in Mathematical Engineering and Artificial Intelligence. 1 academic course (2023).	
<b>Subject: Operating Systems</b>	<i>Universidad Pontificia Comillas</i>
LAB AND THEORY PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE	<i>September - December</i>
Process management, threads, signal communication, processor scheduling, memory management, virtual memory, file management. Bash and Linux commands. 2nd year of the Degree in Mathematical Engineering and Artificial Intelligence. 1 academic course (2022).	
<b>Subject: Programación</b>	<i>Universidad Pontificia Comillas</i>
LAB PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE	<i>September - December</i>
Teaching the Python language. 1st year of the Degree in Mathematical Engineering and Artificial Intelligence. 1 academic year (2022).	
<b>Subject: Software Analysis and Design</b>	<i>Universidad Autónoma de Madrid</i>
LAB JAVA PROGRAMMING TEACHER IN THE COMPUTER SCIENCE GRADE AND IN THE COMPUTER SCIENCE AND MATHEMATICS DEGREE	<i>February - June</i>
Main tasks: Teaching Java language and UML class diagrams. 2º Year of Grade on Computer Science/Grade on Computer Science and Mathematics. 4 academic courses (2019 - 2022).	
<b>Subject: Operating Systems</b>	<i>Universidad Autónoma de Madrid</i>
LAB C PROGRAMMING TEACHER IN THE COMPUTER SCIENCE DEGREE	<i>February - June</i>
Main tasks: Advanced C language teaching (process management, threading and signal communication). 2º Year of Grade on Computer Science. 1 academic course (2018).	

## References

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- **Alejandro Bellogín Kouki**, Universidad Autónoma de Madrid, [alejandro.bellogin@uam.es](mailto:alejandro.bellogin@uam.es) *Madrid, Spain*
- **Pablo Castells Azpilicueta**, Universidad Autónoma de Madrid/Amazon, [pablo.castells@uam.es](mailto:pablo.castells@uam.es) *Madrid, Spain*
- **Mario Castro Ponce**, Universidad Pontificia Comillas, [marioc@iit.comillas.edu](mailto:marioc@iit.comillas.edu) *Madrid, España*