



# Pablo Sánchez Pérez

COMPUTER SCIENTIST · PHD IN COMPUTER SCIENCE AND TELECOMMUNICATIONS ENGINEERING.

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## Work experience

### Universidad Pontificia Comillas - Instituto de Investigación Tecnológica (IIT)

Madrid, Spain

ASSISTANT PROFESSOR

August 2022 - Today

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

### Universidad Autónoma de Madrid

Madrid, Spain

POSTDOCTORAL RESEARCHER

July 2021 - August 2022

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

### Universidad Autónoma de Madrid

Madrid, Spain

PREDOCTORAL RESEARCHER

July 2018 - July 2021

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

### Universidad Autónoma de Madrid

Madrid, Spain

RESEARCHER INTERN IN THE INFORMATION RETRIEVAL GROUP

September 2016 - July 2017

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

### Universidad Autónoma de Madrid

Madrid, Spain

WEB PROGRAMMER AND DATABASE DESIGN AND MANAGEMENT

September 2015 - July 2016

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

## Education

### Universidad Autónoma de Madrid

Madrid, Spain

PHD IN COMPUTER SCIENCE AND TELECOMMUNICATION ENGINEERING

October 2017 - July 2021

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

### Universidad Autónoma de Madrid

Madrid, Spain

MASTER IN RESEARCH AND INNOVATION IN INFORMATION AND TELECOMMUNICATION TECHNOLOGIES

September 2016 - July 2017

- Average grade: 9,05/10.

- High honours in the final Master's thesis titled: **Exploiting Subsequence Matching in Recommender Systems.**

### Universidad Autónoma de Madrid

Madrid, Spain

GRADE ON COMPUTER SCIENCE.

September 2011 - June 2016

- Average grade: 7,83/10.

- High honours in the final degree project titled: **Study And Applications of Algorithms and Data Structures in Recommender Systems.**

## 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.

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

**ATTENDANCE AND PAPERS PRESENTATION AT CONFERENCES**

2024	<b>Attendee and lecturer</b> , 16th FLINS Conference on Computational Intelligence in Decision and Control - The 19th ISKE Conference on Intelligence Systems and Knowledge Engineering (FLINS-ISKE 2024). 16 - 20 July 2024.	Spain
2022	<b>Attendee and lecturer</b> , ACM Conference on User Modeling, Adaptation and Personalization (UMAP 2022). 4 - 7 July 2022.	Spain
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.	Brazil
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****Smart imputation, better recommendations: improving traditional Point-of-Interest recommendation through data augmentation***ACM Transactions on Intelligent Systems and Technology*PABLO SÁNCHEZ, AND ALEJANDRO BELLOGÍN. DOI: 10.1145/3744347.

2025

- JCR Impact factor 2023: 7.2, 18/250 (Computer Science, Information Systems Q1, 27/197 (Computer Science, Artificial Intelligence Q1).

**Understanding the influence of data characteristics on the performance of point-of-interest recommendation algorithms***Information Technology and Tourism*LINUS W. DIETZ, PABLO SÁNCHEZ, AND ALEJANDRO BELLOGÍN. DOI: 10.1007/S40558-024-00304-0.

2025

- JCR Impact factor 2023: 6.3, 16/140 (Hospitality, Leisure, Sport & Tourism: Q1).

**Bias characterization, assessment, and mitigation in location-based recommender systems***Data Mining and Knowledge Discovery*PABLO SÁNCHEZ, ALEJANDRO BELLOGÍN, AND LUDOVICO BORATTO. DOI: 10.1145/3510409.

2023

- JCR Impact factor 2023: 2.8, 105/249 (Information Systems: Q2), 98/197 (Artificial Intelligence: Q2).

**Point-of-Interest Recommender Systems based on Location-Based Social Networks: A Survey from an Experimental Perspective***ACM Computing Surveys*PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1145/3510409.

2022

- JCR Impact factor 2020: 10.282. Q1: 4/110. Computer Science, Theory & Methods.

**On the effects of aggregation strategies for different groups of users in venue recommendation***Information Processing and Management*PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1016/J.IPM.2021.102609.

2021

- JCR Impact factor 2020: 6.222. Q1: 21/162. Computer Science, Information Systems.

## Time and sequence awareness in similarity metrics for recommendation

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1016/J.IPM.2020.102228.

- JCR Impact factor 2020: 6.222. Q1: 21/162. Computer Science, Information Systems.

Information Processing and Management  
2020

## Applying reranking strategies to route recommendation using sequence-aware evaluation

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1007/S11257-020-09258-4.

- JCR Impact factor 2020: 4.412. Q1: 5/23 Computer Science and Cybernetics.

User Modeling and User-Adapted Interaction  
2020

## Building user profiles based on sequences for content and collaborative filtering

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN. DOI: 10.1016/J.IPM.2018.10.003.

- JCR Impact factor 2019: 4.787. Q1: 22/156. Computer Science, Information Systems.

Information Processing and Management  
2019

## Collaborative filtering based on subsequence matching: A new approach

ALEJANDRO BELLOGÍN AND PABLO SÁNCHEZ. DOI: 10.1016/J.INS.2017.08.016.

- JCR Impact factor 2017: 4.305. Q1: 12/148. Computer Science, Information Systems.

Information Sciences

2017

## CONFERENCES

### Context Trails: A Dataset to Study Contextual and Route Recommendation.

PABLO SÁNCHEZ, ALEJANDRO BELLOGÍN, AND JOSÉ L. JORRO-ÁRAGONESES

- CORE 2023: A

### Improving Novelty and Diversity of Nearest-Neighbors Recommendation by Exploiting Dissimilarities

PABLO SÁNCHEZ, JAVIER SANZ-CRUZADO, AND ALEJANDRO BELLOGÍN

- CORE 2023: A
- GGS 2021: A-

19th ACM Conference on Recommender Systems, (RecSys 2025).

2025

### Toward Sustainability Optimization in Touristic Route Recommendation

PABLO SÁNCHEZ AND ALEJANDRO BELLOGÍN

- CORE 2023: N/A.
- GGS 2021: C.

7th European Conference on IR Research, (ECIR 2025).

2025

### Measuring and Mitigating Biases in Location-based Recommender Systems

PABLO SÁNCHEZ, ALEJANDRO BELLOGÍN, AND LUDOVICO BORATTO.

- CORE 2024: N/A.
- GGS 2024: N/A.

16th FLINS Conference on Computational Intelligence in Decision and Control - The 19th ISKE Conference on Intelligence Systems and Knowledge Engineering.

2024

### 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.

Conferencia de la Asociación Española para la Inteligencia Artificial (CAEPIA'24). I Congreso Español en Sistemas de Recomendación (SISREC).

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)

2022

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.

ACM Conference on Recommender Systems (RecSys) 2019

- CORE 2018: rank B.
- GGS 2018: class 2, rating A-.

## Exploiting contextual information for recommender systems oriented to tourism

PABLO SÁNCHEZ. DOI: 10.1145/3298689.3347062.

ACM Conference on Recommender Systems (RecSys) 2019

- CORE 2018: rank B.
- GGS 2018: class 2, rating A-.

## Time-Aware Novelty Metrics for Recommender Systems

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

European Conference on Information Retrieval (ECIR) 2018

- CORE 2018: rank A.
- GGS 2018: class 2, rating A-.

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

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

ACM Conference on Recommender Systems (RecSys) 2018

- CORE 2018: rank B.
- GGS 2018: class 2, rating A-.

## 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

## Accreditations

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|------|---|
| 2024 | <b>ANECA Certification - Six-Year Field 6.2 - Engineering and Architecture - Communication, Computer and Electronic Engineering (2018-2023)</b> , National Agency for Quality Assessment and Accreditation. |
| 2022 | <b>ANECA Certification - Assistant Professor</b> , National Agency for Quality Assessment and Accreditation.  |
| 2022 | <b>ANECA Certification - Associate Professor</b> , National Agency for Quality Assessment and Accreditation.  |
| 2022 | <b>ANECA Certification - Private University Lecturer</b> , National Agency for Quality Assessment and Accreditation.  |

## Technical skills

**Programming languages** Java (High level), Python, Bash, C, SQL (Medium level). Ease of learning any programming language.

**Software development** Eclipse, Pycharm, NetBeans, Visual Studio, PostgreSQL, SQLServer.

**Operating Systems** Microsoft Windows, GNU/Linux.

**Other software** LaTeX, Microsoft Office, Libre Office.

**Other skills** Responsability, Commitment, Empathy, Motivation to learn, Organized.

## Languages

**Spanish** Native

**English** Reading: High. Writing: Medium-High. Speaking: Medium-High. Certificate: First Certificate in English University of Cambridge.

## University Teaching

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### Subject: Databases

*Universidad Pontificia Comillas*

LAB AND THEORY PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE

January - April

Relational and non-relational databases. Relational model, SQL, MongoDB and Neo4J. 2nd year of Degree in Mathematical Engineering and Artificial Intelligence. 2 academic courses (2023).

### Subject: Algorithms and Data Structures

*Universidad Pontificia Comillas*

LAB PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE

January - April

Teaching Python language, data structures and algorithms. 1st year of the Degree in Mathematical Engineering and Artificial Intelligence. 1 academic course (2023).

### Subject: Operating Systems

*Universidad Pontificia Comillas*

LAB AND THEORY PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE

September - December

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. 2 academic course (2022).

### Subject: Programming

*Universidad Pontificia Comillas*

LAB PROFESSOR. DEGREE IN MATHEMATICAL ENGINEERING AND ARTIFICIAL INTELLIGENCE

September - December

Teaching the Python language. 1st year of the Degree in Mathematical Engineering and Artificial Intelligence. 1 academic year (2022).

### Subject: Software Analysis and Design

*Universidad Autónoma de Madrid*

LAB JAVA PROGRAMMING TEACHER IN THE COMPUTER SCIENCE GRADE AND IN THE COMPUTER SCIENCE AND MATHEMATICS DEGREE

February - June

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).

### Subject: Operating Systems

*Universidad Autónoma de Madrid*

LAB C PROGRAMMING TEACHER IN THE COMPUTER SCIENCE DEGREE

February - June

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

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