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# OLIVIER JEUNEN

Antwerp, Belgium

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*Last updated: October 2025*

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## PROFESSIONAL EXPERIENCE

### Aampe

*Principal Research Scientist*

December 2024 – present

*Antwerp, Belgium*

Research and development centred around machine learning applications of personalisation and recommendation.

### ShareChat

*Lead Applied Scientist*

December 2022 – December 2024

*Edinburgh, United Kingdom*

Research and development centred around recommendation, experimentation, and optimisation.

- Drive continuous improvements to core recommendation system for varying content types, leading to significant impact on user satisfaction and retention metrics as well as business revenue.
- Responsible for end-to-end ideation, modelling, development, deployment, and evaluation.
- Developed and shipped novel evaluation methods that lower the cost of experimentation significantly.
- Communicating scientific results to internal and external stakeholders, focusing on actionable insights.

### Amazon

*Postdoctoral Scientist*

December 2021 – November 2022

*Edinburgh, United Kingdom*

“Early-Career Scientist”, researching and developing machine learning and causal inference in advertising.

- Develop and implement novel methods for a wide range of advertising problems, from recommendation to bidding and auctions; leading to significant increases for business KPIs across business units.
- Bridging communication between economists, engineers and management to identify R&D roadmaps.

### Spotify

*Research Scientist Intern*

June 2021 – August 2021

*London, United Kingdom*

Research and development centred around the intersection of causal inference and machine learning.

### Facebook (Meta)

*Research Engineer Intern*

September 2020 – November 2020

*London, United Kingdom*

Research and development centred around uncertainty estimation for causal models in computational advertising.

### Criteo AI Lab

*Research Scientist Intern*

June 2019 – September 2019

*Paris, France*

Research and development centred around applications of counterfactual inference for recommender systems.

### University of Antwerp

*(Pre-/Post-)Doctoral Research Scientist*

October 2017 – November 2021

*Antwerp, Belgium*

Research focused on implicit-feedback recommender systems and their evaluation in the Adrem Data Lab.

### Froomle (University of Antwerp spin-off)

*Data Scientist*

August 2017

*Antwerp, Belgium*

Back-end development for a real-time recommendation architecture.

### PrediCube (University of Antwerp spin-off)

*Data Scientist & Research Intern*

July 2016 – June 2017

*Antwerp, Belgium*

Research and development on distributed learning for computational advertising.

### Technicolor

*Data Scientist & Research Intern*

September 2015 – June 2017

*Antwerp, Belgium*

Research internships, student jobs and M.Sc. thesis focused on machine learning applications with IoT data.

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## EDUCATION

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### University of Antwerp, Belgium

Ph.D. in Computer Science	Thesis: <i>Offline Approaches to Recommendation with Online Success</i>	2017 – 2021
M.Sc. in Computer Science	Minor: Data Science & Research	<i>Magna cum laude</i> 2015 – 2017
B.Sc. in Computer Science		<i>Cum laude</i> 2012 – 2016
Erasmus exchange semester	<b>University of Edinburgh, United Kingdom</b>	Jan.–June 2015
High School: Moretus, Belgium	Latin–Mathematics (option extra mathematics)	2006 – 2012

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## TECHNICAL SKILLS & RESEARCH INTERESTS

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<b>Programming</b>	C, C++, Java, <b>Python</b> , <b>SQL</b>
<b>Frameworks</b>	<b>Matplotlib</b> , <b>Numpy</b> , <b>Pandas</b> , <b>PyTorch</b> , <b>Scipy</b> , Scikit-Learn, <b>Apache Spark</b> , Tensorflow
<b>Cloud Computing</b>	Amazon Web Services ( <b>AWS</b> ), Google Cloud Platform ( <b>GCP</b> ), Databricks
<b>Research Focus</b>	Causality, <b>contextual bandits</b> , information retrieval, machine learning, <b>recommender systems</b>
<b>Languages Spoken</b>	English, Dutch, French (basic)
<b>Miscellaneous</b>	Level 1 & 2 Award in Wines, with distinction (Wine & Spirit Education Trust)

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## HONOURS, AWARDS & ACHIEVEMENTS

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<b>ICTIR '25</b>	Best Area Chair Award
<b>RecSys '25</b>	Distinguished Senior PC Member Award
<b>RecSys '21, '22, '23, '24</b>	Outstanding Reviewer Award
<b>AdKDD workshop at KDD '22</b>	Best Paper Award
<b>RecSys '21</b>	Best Student Paper Award
<b>WWW '21</b>	Student Scholarship Award
<b>Criteo's RecoGym Challenge '20</b>	Led a team of MSc students to 1 <sup>st</sup> place prize
<b>RecSys '19</b>	SIGCHI Travel Grant

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## INVITED TALKS, KEYNOTES & GUEST LECTURES

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Oct. '25 <b>Experimentation that Prioritises Causal Decision-Making</b>	Booking.com, NL
Sept. '25 <i>Invited Panel Discussion</i>	DaQuaMRec Workshop at RecSys '25, CZ
Sept. '25 <b>Experimentation that Prioritises Causal Decision-Making</b>	Berlin Experimentation Meetup, DE
Sept. '25 <b><math>\Delta</math>-OPE: Off-Policy Estimation with Pairs of Policies</b>	University of Glasgow, UK, Online
Sept. '25 <b><math>\Delta</math>-OPE: Off-Policy Estimation with Pairs of Policies</b>	WBD, CA, USA, Online
July '25 <b>On (n)DCG as an Off-Policy Evaluation Metric for Recommendation</b>	WBD, CA, USA, Online
June '25 <b>On (n)DCG as an Off-Policy Evaluation Metric for Recommendation</b>	Etsy, NY, USA, Online
May '25 <i>Poster: Counterfactual Inference under Thompson Sampling</i>	PRS Workshop, Netflix, CA, USA
Jan. '25 <b>On (n)DCG as an Off-Policy Evaluation Metric for Recommendation</b>	PocketFM, IN, Online
Oct. '24 <i>Invited Panel Discussion</i>	INTROSPECTIVES Workshop at RecSys '24, IT
May '24 <b>On (n)DCG as an Off-Policy Evaluation Metric for Recommendation</b>	University of Amsterdam, NL
May '24 <i>Guest Lecture: Learning to Value, Bid and Auction in Online Advertising</i>	University of Antwerp, BE
May '24 <i>Keynote: Learning to Value, Bid and Auction in Online Advertising</i>	AI4Ads WS at WWW '24, SG
Apr. '24 <b>Learning to Value, Bid and Auction in Online Advertising</b>	Maastricht University, NL
Jan. '24 <b>Pessimistic Decision-Making for Recommender Systems</b>	Meta, USA, Online
Dec. '23 <i>Invited Panel Discussion</i>	DBWRS '23, BE
Dec. '23 <b>Pessimistic Decision-Making for Recommender Systems</b>	DBWRS '23, BE
Aug. '23 <b>Off-Policy Learning to Bid with AuctionGym</b>	Tubi, USA, Online
July '23 <b>Pessimistic Decision-Making for Recommender Systems</b>	University of Glasgow, UK
Apr. '23 <b>Probabilistic Position Bias Models for Short-Video Recommendations</b>	ECIR '23 Industry Day, IE
Oct. '22 <b>Learning to Bid with AuctionGym</b>	Indeed, USA, Online
June '22 <i>Poster: Pessimistic Decision-Making for Recommendation</i>	PRS Workshop, Netflix, CA, USA

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Apr. '22	<i>Guest Lecture: Machine Learning Challenges in Advertising at Amazon</i>	University of Antwerp, BE
Apr. '22	<b>Advances in Bandit Learning for Recommendation</b>	Booking.com, NL, Online
Feb. '22	<b>Embarrassingly Shallow Auto-Encoders for Dynamic Collaborative Filtering</b>	DIR '21, NL, Online
Dec. '21	<i>Podcast Interview</i>	“Recsperts: Recommender Systems Experts” series.
Nov. '21	<b>Advances in Bandit Learning for Recommendation</b>	RMIT University, AUS, Online
Oct. '21	<i>Keynote: The Quest for Recommendations with Online Success</i>	ORSUM Workshop at RecSys '21, NL
Sept. '21	<b>Advances in Bandit Learning for Recommendation</b>	University of Amsterdam, NL
Aug. '21	<b>Pessimistic Reward Models for Off-Policy Learning in Recommendation</b>	Spotify, UK & USA, Online
July '21	<b>Realigning Offline Objectives with Online Success</b>	Farfetch, PT, Online
Mar. '21	<b>Recommender Systems as (Offline) Bandit Learning</b>	Cornell University, USA, Online
Dec. '20	<b>Joint Policy-Value Learning for Recommendation</b>	DIR '20, BE, Online
Aug. '20	<b>Joint Policy-Value Learning for Recommendation</b>	AISC “ML Explained” Seminars, CAN, Online
Feb. '20	<b>Counterfactual Policy Learning for Recommendation</b>	SMiLe '20, DE
Dec. '19	<b>Counterfactual Policy Learning for Recommendation</b>	DBDBD '19, NL
Nov. '19	<b>Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments</b>	DIR '19, NL
Nov. '19	<b>Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems</b>	Uni. of Glasgow, UK
Sept. '19	<b>Counterfactual Policy Learning for Recommendation</b>	Data Science Meetups, BE

## TEACHING & TUTORIALS

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Sept. '25	<b>Practical Bandits: An Industry Perspective</b>	CONSEQUENCES Workshop at RecSys '25, CZ
Oct. '24	<b>Fantastic Reviews and How to Write Them</b>	RecSys Summer School, IT
July '24	<b>Fantastic Reviews and How to Write Them</b>	European Summer School on Information Retrieval, NL
Mar. '24	<b>Practical Bandits: An Industry Perspective</b>	WSDM '24, MX
May '23	<b>Practical Bandits: An Industry Perspective</b>	WWW '23, TX, USA
Apr. '21	<b>Recommender Systems through the Lens of Decision Theory</b>	WWW '21, Online
July '20	<b>A Gentle Introduction to Recommendation as Counterfactual Policy Learning</b>	UMAP '20, Online
Sept. '19	<b>Bandit Feedback and Likelihood Models for Recommendation</b>	RecSys Summer School, SWE
June '19	<b>Neural Networks and Causal Recommendation</b>	Data Science Summer School, École Polytechnique, FR
'17–'21	<b>Research Thesis Supervisor and Jury Member</b>	M.Sc. Computer Science, University of Antwerp, BE
'17–'20	<b>Artificial Intelligence Project</b>	M.Sc. Computer Science, University of Antwerp, BE

## OPEN-SOURCE PROJECTS

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<b>AuctionGym</b>	A Reinforcement Learning Simulator for Online Advertising	<b>GitHub:</b> <a href="https://github.com/amzn/auction-gym/">amzn/auction-gym/</a>
<b>RecoGym</b>	A Reinforcement Learning Simulator for Recommender Systems	<b>GitHub:</b> <a href="https://github.com/criteo-research/reco-gym/">criteo-research/reco-gym/</a>
<b>Various</b>	Implementations of published algorithms & methods	<b>GitHub:</b> <a href="https://github.com/olivierjeunen/">olivierjeunen</a>

## PATENTS

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- Method for Allocating Frequency Channels to a Plurality of Neighbouring Access Points.  
**O. Jeunen**, E. Zeljkovic, P. Bosch, K. Van Doorselaer, N. Godman. June 2017. eu 17305724.1 – 1875.

## PEER-REVIEWED ACADEMIC PUBLICATIONS

---

### Journal Articles and Dagstuhl Reports

1. Evaluation Perspectives of Recommender Systems: Driving Research and Education. Dagstuhl, 2024  
C. Bauer, A. Said, E. Zangerle, **et al.**
2. Scheduling on a Budget: Avoiding Stale Recommendations with Timely Updates. Elsevier MLWA, 2023  
R. Verachtert, **O. Jeunen** and B. Goethals.
3. Pessimistic Decision-Making for Recommender Systems. ACM ToRS, 2022  
**O. Jeunen** and B. Goethals. *Special Issue on Highlights of RecSys '21*
4. Embarrassingly Shallow Auto-Encoders for Dynamic Collaborative Filtering. Springer UMUI, 2022  
**O. Jeunen**, J. Van Balen and B. Goethals. *Special Issue on Dynamic Recommender Systems and User Modelling*

## Conference Papers

5. Meta Off-Policy Estimation.  
**O. Jeunen.** RecSys '25
6.  $t$ -Testing the Waters: Empirically Validating Assumptions for Reliable A/B-Testing.  
**O. Jeunen.** RecSys '25
7. Agentic Personalisation of Cross-Channel Marketing Experiences.  
S. Abboud, E. Hanna, **O. Jeunen**, V. Raheja and S. Wheeler. RecSys '25
8. Counterfactual Inference under Thompson Sampling.  
**O. Jeunen.** RecSys '25
9.  $\Delta$ -OPE: Off-Policy Estimation with Pairs of Policies.  
**O. Jeunen** and A. Ustimenko. RecSys '24
10. Multi-Objective Recommendation via Multivariate Policy Learning.  
**O. Jeunen**, J. Mandav, I. Potapov, N. Agarwal, S. Vaid, W. Shi and A. Ustimenko. RecSys '24
11. Optimal Baseline Corrections for Off-Policy Contextual Bandits.  
S. Gupta\*, **O. Jeunen**\*, H. Oosterhuis and M. de Rijke. *\*denotes equal contribution* RecSys '24
12. Powerful A/B-Testing Metrics and Where to Find Them.  
**O. Jeunen**, S. Baweja, N. Pokharna and A. Ustimenko. RecSys '24
13. On (Normalised) Discounted Cumulative Gain as an Off-Policy Evaluation Metric for Top- $n$  Recommendation.  
**O. Jeunen**, I. Potapov and A. Ustimenko. KDD '24
14. Learning Metrics that Maximise Power for Accelerated A/B-Tests.  
**O. Jeunen** and A. Ustimenko. KDD '24
15. Monitoring the Evolution of Behavioural Embeddings in Social Media Recommendation.  
S. Saket, **O. Jeunen** and Md. D. Kalim. SIGIR '24
16. Learning-to-Rank with Nested Feedback.  
H. Sagtani, **O. Jeunen** and A. Ustimenko. ECIR '24
17. Variance Reduction in Ratio Metrics for Efficient Online Experiments.  
S. Baweja, N. Pokharna, A. Ustimenko and **O. Jeunen**. ECIR '24
18. Ad-load Balancing via Off-policy Learning in a Content Marketplace.  
H. Sagtani, M. G. Jhawar, R. Mehrotra and **O. Jeunen**. WSDM '24
19. On Gradient Boosted Decision Trees and Neural Rankers.  
**O. Jeunen**, Sagtani, Doi, Karimov, Pokharna, Kalim, Ustimenko, Green, Mehrotra and Shi. FIRE '23
20. A Probabilistic Position Bias Model for Short-Video Recommendation Feeds.  
**O. Jeunen.** RecSys '23
21. Off-Policy Learning to Bid with AuctionGym.  
**O. Jeunen**, S. Murphy and B. Allison. KDD '23
22. Disentangling Causal Effects from Sets of Interventions in the Presence of Unobserved Confounders.  
**O. Jeunen**, C. M. Gilligan-Lee, R. Mehrotra and M. Lalmas. NeurIPS '22
23. Pessimistic Reward Models for Off-Policy Learning in Recommendation.  
**O. Jeunen** and B. Goethals. 🏆 Best Student Paper Award at RecSys '21
24. Top- $K$  Contextual Bandits with Equity of Exposure.  
**O. Jeunen** and B. Goethals. RecSys '21
25. Closed-Form Models for Collaborative Filtering with Side-Information.  
**O. Jeunen**, J. Van Balen and B. Goethals. RecSys '20
26. Joint Policy-Value Learning for Recommendation.  
**O. Jeunen**, D. Rohde, F. Vasile and M. Bompaire. KDD '20
27. Efficient Similarity Computation for Collaborative Filtering in Dynamic Environments.  
**O. Jeunen**, K. Verstrepren and B. Goethals. RecSys '19

28. Revisiting Offline Evaluation for Implicit-Feedback Recommender Systems.  
**O. Jeunen.** RecSys '19
29. A Machine Learning Approach for IEEE 802.11 Channel Allocation.  
**O. Jeunen**, P. Bosch, M. Van Herwegen, K. Van Doorselaer, N. Godman and S. Latré. CNSM '18

### Workshop Papers

30. Procedural Memory is not All You Need: Bridging Cognitive Gaps in LLM-based Agents.  
S. Wheeler and **O. Jeunen.** HyPer '25  
at UMAP
31. A Simple Model to Estimate Sharing Effects in Social Networks.  
**O. Jeunen.** CONSEQUENCES '24  
at RecSys
32. RecFusion: A Binomial Diffusion Process for iD Data for Recommendation.  
G. Bénédicte, **O. Jeunen**, S. Papa, S. Barghav, D. Odijk and M. de Rijke. GenRec '23  
at CIKM
33. A Common Misassumption in Online Experiments with Machine Learning Models.  
**O. Jeunen.** PERSPECTIVES '23  
at RecSys
34. Offline Recommender System Evaluation under Unobserved Confounding.  
**O. Jeunen** and B. London. CONSEQUENCES '23  
at RecSys
35. Ad-load Balancing via Off-policy Learning in a Content Marketplace.  
H. Sagtani, M. G. Jhawar, R. Mehrotra and **O. Jeunen.** CONSEQUENCES '23  
at RecSys
36. A Probabilistic Position Bias Model for Short-Video Feeds.  
**O. Jeunen.** ML4SM '23  
at WWW
37. A Probabilistic Framework to Learn Auction Mechanisms via Gradient Descent.  
**O. Jeunen**, L. Stavrogiannis, A. Sayedi and B. Allison. AI4WebAds '23  
at AAAI
38. Learning to Bid with AuctionGym.  
**O. Jeunen**, S. Murphy and B. Allison. 🏆 Best Paper Award at AdKDD '22  
at KDD
39. Disentangling Causal Effects from Sets of Interventions in the Presence of Unobserved Confounders.  
**O. Jeunen**, C. M. Gilligan-Lee, R. Mehrotra and M. Lalmas. WHY '21  
at NeurIPS
40. Offline Evaluation of Reward-Optimizing Recommender Systems: The Case of Simulation.  
I. Aouali, A. Benhalloum, M. Bompaire, B. Heymann, **O. Jeunen**, D. Rohde, O. Sakhi and F. Vasile. SimuRec '21  
at RecSys
41. An Empirical Evaluation of Doubly Robust Learning for Recommendation.  
**O. Jeunen** and B. Goethals. REVEAL '20  
at RecSys
42. Three Methods for Training on Bandit Feedback.  
D. Mykhaylov, D. Rohde, F. Vasile, M. Bompaire and **O. Jeunen.** CausalML '19  
at NeurIPS
43. Learning from Bandit Feedback: An Overview of the State-of-the-art.  
**O. Jeunen**, D. Mykhaylov, D. Rohde, F. Vasile, A. Gilotte and M. Bompaire. REVEAL '19  
at RecSys
44. On the Value of Bandit Feedback for Offline Recommender System Evaluation.  
**O. Jeunen**, D. Rohde and F. Vasile. REVEAL '19  
at RecSys
45. Predicting Sequential User Behaviour with Session-based Recurrent Neural Networks.  
**O. Jeunen** and B. Goethals. WSDM Cup '19  
at WSDM
46. Fair Offline Evaluation Methodologies for Implicit-Feedback Recommender Systems with MNAR Data.  
**O. Jeunen**, K. Verstrepen and B. Goethals. REVEAL '18, at RecSys

### Tutorials

47. Practical Bandits: An Industry Perspective (*extended*).  
B. van den Akker, **O. Jeunen**, Y. Li, B. London, Z. Nazari and D. Parekh. WSDM '24
48. Practical Bandits: An Industry Perspective.  
B. van den Akker, **O. Jeunen**, Y. Li, B. London, Z. Nazari and D. Parekh. WWW '23
49. Recommender Systems through the Lens of Decision Theory.  
F. Vasile, D. Rohde, **O. Jeunen**, A. Benhalloum and O. Sakhi. WWW '21

50. A Gentle Introduction to Recommendation as Counterfactual Policy Learning. UMAP '20  
F. Vasile, D. Rohde, **O. Jeunen** and A. Benhalloum.

### Demonstrations

51. Interactive Evaluation of Recommender Systems with SNIPER – An Episode Mining Approach. RecSys '19  
S. Moens, **O. Jeunen** and B. Goethals.

### Workshop Proposals

52. CONSEQUENCES – Causality, Counterfactuals & Sequential Decision-Making for Recommender Systems. RecSys '25  
H. Oosterhuis, **O. Jeunen**, Y. Saito, F. Vasile, Y. Wang and T. Joachims.
53. CONSEQUENCES – Causality, Counterfactuals & Sequential Decision-Making for Recommender Systems. RecSys '24  
**O. Jeunen**, H. Oosterhuis, Y. Saito, F. Vasile and Y. Wang.
54. CONSEQUENCES – Causality, Counterfactuals & Sequential Decision-Making for Recommender Systems. RecSys '23  
**O. Jeunen**, T. Joachims, H. Oosterhuis, Y. Saito, F. Vasile and Y. Wang.
55. CONSEQUENCES – Causality, Counterfactuals & Sequential Decision-Making for Recommender Systems. RecSys '22  
**O. Jeunen**, T. Joachims, H. Oosterhuis, Y. Saito and F. Vasile.

### Graduate Theses

1. Offline Approaches to Recommendation with Online Success. Ph.D. in Computer Science – 2021  
**Promotor:** prof. dr. Bart Goethals.  
**Committee:** prof. drs. Toon Calders, Maarten de Rijke, Floris Geerts, Thorsten Joachims, and Mounia Lalmas.
2. Data-Driven Frequency Planning in IEEE 802.11 Networks. M.Sc. in Computer Science – 2017  
**Promotor:** prof. dr. Steven Latré. *Summa cum laude*

## PROFESSIONAL SERVICE

### Organising Committee

Industry co-chair for **RecSys** '25  
Publicity co-chair for **RecSys** '24  
Industry Day co-chair for **ECIR** '24  
**CONSEQUENCES** Workshop at **RecSys** '22–'25  
Web co-chair for **RecSys** '22–'23  
Dutch-Belgian Information Retrieval Workshop (**DIR**) '20  
dr. Shashank Gupta, October '25

### Doctoral Committee

### Doctoral Symposium Mentor

### Session Chair

### Area Chair

### Senior Program Committee

### Program Committee

**RecSys** '25, **SIGIR** '25, **WSDM** '26, **ECIR** '26, **WWW** '26  
**RecSys** '21–'24, **WWW** '22, **SIGKDD** '22–'25, **WSDM** '22–'25, **CIKM** '23–'24,  
**SIGIR** '23–'24, **ECIR** '24  
**RecSys Workshops:** **ORSUM** '21–'23, **LERI** '23, **NORMALize** '23–24, **PERSPECTIVES** '23,  
**RecSys Challenge** '23–'24, **SURE** '24  
**KDD Workshop:** **EvalRS** '23

### Reviewer

ACM Transactions on Information Systems (**ToIS**)  
ACM Transactions on Recommender Systems (**ToRS**)  
IEEE Transactions on Knowledge & Data Engineering (**TKDE**)  
Springer Data Mining and Knowledge Discovery (**DAMI**)  
Springer Machine Learning (**ML**)  
**CHI** '23  
**AISTATS** '24

### Miscellaneous

Co-authoring ACM RecSys reviewing guidelines for (S)PC Members since 2025