

PANAGIOTIS SYMEONIDIS



Phone: (0030) 697-3882408

Email: psymeon@gmail.com

psymeon@aegean.gr

Website: www.panagiotissymeonidis.com

Address: Lykavitou 14,
Stavroupoli, 56431,
Thessaloniki, Greece

SHORT BIO

Panagiotis Symeonidis is Associate Professor at the School of Information and Communication Systems Engineering of the Aegean University, Greece from November 2020. Before, he was Assistant Professor at the Faculty of Computer Science (scientific sector INF/01) of the Free University of Bolzano, Italy, from November 2016 till November 2020. Before moving to Bolzano, he worked for 8 years as Adjunct Assistant Professor at the Department of Informatics of the Aristotle University of Thessaloniki, Greece. He received a B.Sc. degree in Applied Informatics from University of Macedonia at Thessaloniki in 1996. He also received a M.Sc. degree in Information Systems from the same university in 2004. He received his Ph.D. in Web Mining and Information Retrieval for Personalization from the Department of Informatics of the Aristotle University of Thessaloniki in 2008. His research interests include web mining (usage mining, content mining and graph mining), information retrieval, personalized health, recommender systems, and social media analytics. He is co-author of almost **100 publications** and the first author in more than **50 publications**. His publications are analysed in 4 international books, 2 Greek books, 6 book chapters, 32 journal publications and 48 conference/workshop publications. His published papers have received **more than 4000 citations** and has an **h-index = 33**, according to Google Scholar. In 2017, he was recognized from AMiner among the Most Influential Researchers <https://www.aminer.cn/ai10/recommendation> of the last decade to the field of Recommender Systems. Two out of three of his journal publications were published in top-tier or highly ranked journals. One out of three of his conference publications have been published in top-tier or highly ranked conferences. Finally, he has been recognized **as one of the top 2% of scientists globally for three consecutive years (2019, 2020, and 2021)**, a testament to the impact and influence of his research contributions in the fields of recommender systems and data science.

Vision

My vision for the next five years is to apply deep learning algorithms on medical data and/or social media data for providing either Personalized Health, and Graph-based Recommender Systems, respectively. The main problems to deal with are: (i) the “curse” of data dimensionality and (ii) the need for effective and safe predictions/recommendations along with explanations.

EDUCATION

PhD Aristotle University of Thessaloniki, Greece, Computer Science
Thesis: “Data Mining for Web Personalization”
Supervisor: Yannis Manolopoulos

June 2008

MS	University of Macedonia, Thessaloniki, Greece, Information Systems Thesis: “A Content-based Management System for Web” Advisor: Konstantinos Tarabanis	May 2004
BS	University of Macedonia, Greece, Applied Informatics (Grade 7,45/10)	May 1996

SCHOLARSHIPS, HONOURS AND AWARDS

Among the 2% of the top scientists in the world for year 2021	2022
I was included in the 2% of the world’s top scientists according to the citations that their research work received in the year 2021 https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw	
Among the 2% of the top scientists in the world for year 2020	2021
I was included in the 2% of the world’s top scientists according to the citations that their research work received in the year 2020 Source: Baas, J.; Boyack, K.; Ioannidis, J. (2021), “August 2021 data-update for "Updated science-wide author databases of standardized citation indicators", Mendeley Data, V3, doi:10.17632/btchxktzyw.3 https://elsevier.digitalcommonsdata.com/datasets/btchxktzyw/3	
Among the 2% of the top scientists in the world for year 2019	2020
I was included in the 2% of the world’s top scientists according to the citations that their research work received in the year 2019 Source: Ioannidis J., Boyack K., Baas J (2020) Updated science-wide author databases of standardized citation indicators. PLoS Biol 18(10): https://doi.org/10.1371/journal.pbio.3000918	
Three of my books made it to the 82 Best Recommender System Books of All Time	2019
BookAuthority collects and ranks the best books in the world. https://bookauthority.org/books/best-recommender-system-books	
Most Influential Scholar Award (2007~2017)	2018
I was recognized from AMiner among the Most Influential Researchers of the last decade to the field of Recommender Systems https://www.aminer.cn/ai10/recommendation	
Italian Habilitation	2017
I got the Italian Habilitation Certificate in 2017, which makes me eligible to apply for any tenure track professorship position (in the level of Associate Professor) in Italy for the research domain 01/B1 informatics.	
Greek State Scholarship	2013
4-month scholarship from the Greek Scholarship Foundation (IKY) for post-doctoral research in Magdeburg University with subject “Recommender Systems in multi-dimensional Social Networks”	
German State Scholarship	2012
4-month scholarship from the German Scholarship Foundation (DAAD) for post-doctoral research in Magdeburg University with subject “Recommender Systems in time evolving Social Networks”	

Aristotle University Scholarship **2010**

1-year scholarship to perform research at the Aristotle University of Thessaloniki, Greece

Innovative Business Plan Award **2008**

Award for an Innovative Business Plan by the “Innovative Ideas Contest” of Central Macedonia, Greece for the research proposal “IPTV Explain: Providing Explained Recommendations for Digital Content”

Greek State Scholarship **2005**

3-year scholarship for Ph.D. studies from the Greek Scholarship Foundation (IKY)

ADMINISTRATIVE EXPERIENCE

Director and Chief Executive **19/08/2011 - 31/07/2015**

Head of the 1st Laboratory Center of Stavroupoli Thessaloniki
1st EK Stavroupolis
Thrakis 4, 56430 Thessaloniki (Greece)

RESEARCH EXPERIENCE

University of the Aegean, Greece **2021 – 2024**

- 1/2/2024 – 31/7/2024 six months research visit in ULB of Brussels, Belgium for collaboration in the scientific field of Private and Fair Recommendations: Total budget of the project 6000 euros.
- 15/1/2022-15/12/2022 Hellenic Academic Ebooks – Completion of authoring the Greek book “Intelligent Recommender Systems”, Total budget of the project: €5900
- 15/07/2021-15/12/2021: Hellenic Academic Ebooks – Start of authoring the Greek book “Intelligent Recommender Systems” (Ευφυή Συστήματα Συστάσεων), Total budget of the project: €2200
- Submitted proposal to the call “HORIZON-HLTH-2022-TOOL-12-two-stage” with title “Personalized AI-based Treatment for patients with coronary artery disease” (Acronym: Patient) with 7 other organizations and 3 hospitals (PANEPISTIMIAKO GENIKO NOSOKOMEIO IRAKLEIOU, HUMANITAS MIRASOLE SPA, and LIETUVOS SVEIKATOS MOKSLU UNIVERSITETO LIGONINE KAUNO KLINIKOS)

Free University of Bolzano, Italy**2016 – 2021**

- 2019-2020: HealthExplAI – Explainable AI for Health. – Development of a Drug Recommender System for Accurate and Explainable medical Decisions, Total budget of the project: €5000 (role:PI)
- 2018-2020: RecTV – Recommender for TV Shows in collaboration with KIM -Keep in Mind Srl. total budget of the project: €10.000 (role: PI)
- 2018-2019: MediaRec - News Recommendation based on heterogeneous and dynamic data from social media. total budget of the project: €5.000 (Role:PI)
- 2018-2020: ONCOnet2 - Piattaforma modulare per la gestione territoriale “Simultaneous Care” del paziente oncologico – total budget of the project €25.000 (role: co-PI)
- 2017-2021: DSSApple - Development of a decision support system for the determination of postharvest disorders and diseases of apples. total budget of the project €192.500
- 1/6/2017-1/6/2018: IMPRESS - Improving the Quality of Recommender Systems– total budget of the project €9.996

Aristotle University of Thessaloniki, Greece**2007 - 2013**

- 1/4/2012 – 31/5/2013: Bilateral Greek–Turkey project (10.000 €) with subject “Data mining for social web”
- 1/1/2011 – 31/12/2012: Bilateral Greek-German project with the code name IKYDA 2011 (15.000 €) with subject “A recommendation Engine for social Web”
- 9/8/2010 – 31/5/2012: Initial Vocational Training of Leonardo Da Vinci project from EU (75.987 €) with the subject “Information Technology for touristic businesses in Europe”
- 1/5/2007 – 1 /12/2007: Development of a collaborative platform for targeted advertising to Internet users (5000€) project code 04VEN71 PAVE NE 2004 of the General Secretariat for Research and Technology of Greece

TEACHING EXPERIENCE

Hellenic Open University (EAP)

Master in Data Science and Machine Learning [DAMA]

Module “Algorithmic Techniques and Systems for Data Science and Machine Learning”

2022-2024**Masters Students Advised**

- Simos Filaretos-Vasileios, thesis title: “Private and Fair Job Recommendations” September 2024
- Ilias Kontos, thesis title “Predicting the appropriate combination of drugs for patients using machine learning methods”, September 2024
- Christina Katsiri, thesis title: “Customer sentiment analysis”, May 2024
- Evaggelia Ntova, thesis title: “Implementation of an application for the prediction of insulin in patients with diabetes” September 2024

University of the Aegean, Greece
Associate Professor, Faculty of Information
and Communication Systems Engineering

2020 -2023

Courses taught in academic years 2020-2021, 2021-2022

- Data bases II (Autumn Semester)
- Object Oriented Programming with java (Autumn Semester)
- Information Retrieval (Spring Semester 2021)
- Intelligent Recommender Systems (Spring Semester 2022)
- Advanced Topics in Data bases and Data Structures (Spring Semester 2021)
- Semantic Web (Autumn Semester)
- Data Mining and Big Data (Autumn Semester)
- Internet Programming (Spring Semester 2022)

Supervisor of PhD. Students

(1) Stavros Davidopoulos, title “Private and Fair Recommendations” started his PhD in June 2024

Member of the Consulting Committee for the PhD students:

(1) Dimitrios Dimopoulos, title “Polymetric medical data analysis” started 23/2/2023

(2) Antonios Smardas, title “Semantic Service Discovery Supported via Machine Learning Techniques” Started 1/09/2022

(3) Αθανάσιος Καρακώστας: τίτλος Ανάπτυξη μεθόδων και εργαλείων για την κατανόηση βασικών εννοιών δομών και βάσεων δεδομένων σε μαθητές δημοτικού. (Έναρξη: Φεβρουάριος 2021)

Masters Students Advised

- Stylianos Stasinou, thesis title: “Drug Recommendation by using Auxiliary Medical Data”, March 2022
- Gregoris Manitaras thesis title “Recommendation of safe drug combinations”, October 2022
- Stavros Davidopoulos thesis title “Fairness in Job Recommendations”, March 2024
- Theocharis Theocharidis thesis title “Market Surveillance from Product’s Reviews using Knowledge Graphs”, July 2024

Free University of Bolzano, Italy
Assistant Professor, Faculty of Computer Science

2016 -2020

Courses taught in academic years 2016-2017, 2017-2018, and 2018-2019

- Internet and Mobile Services (44h Lectures), BS – Autumn Semester 2018
- Information Search and Retrieval (24h Exercises), MSc, Spring Semester 2018
- Data bases (48h Exercises), BSc – Autumn Semester 2017
- Internet and Mobile Services (24h Exercises), BSc – Spring Semester 2017
- Data bases (24h Exercises), BSc – Autumn Semester 2018

Doctoral Students (co-supervising with Prof. Markus Zanker)

- Ludovik Coba, thesis title: “Offline and Online Evaluation of Recommender Systems”
- ChemsEddine Berbague, thesis title: “Studying Novelty and Diversity in Recommender Systems (co-supervisor with Prof. Hassina Seridi, Annaba University, Algeria)”

Masters Students Advised

- Luca Belinazzi, thesis title: “Drug Recommendation by using Auxiliary Medical Data”, July 2021
- Dmitry Chaltcev, thesis title: “Session-based News Recommendation using Markov and Probabilistic Modelling”, July 2018
- Lidija Kirjackaja, thesis title: “Recommending News Using Graph-based Algorithms”, June 2018

Aristotle University of Thessaloniki, Greece

2008 - 2015

Adjunct Assistant Professor, Department of Computer Science

Courses taught in Academic years 2010-2011, 2011-2012, 2012-2013, 2013-2014, 2014-2015, 2015-2016

- Databases for businesses at the Post Graduate Program of Departments of Informatics and Economics (Autumn Semester)
- Data Mining at the Post Graduate Program of the Departments of Informatics and Economics, Aristotle University of Thessaloniki (Spring Semester)

Doctoral Students (co-supervisor with Prof. Yannis Manolopoulos)

- Alexis Papadimitriou (5 common papers)
Ph.D. Thesis: “Algorithms for Data Management and Data Knowledge Extraction in Graphs” (2012).
- Pavlos Kefalas (4 common papers)
Ph.D. Thesis: “Recommendation Models for Big Spatio-Temporal Data” (2017).

Masters Students Advised

A/A Student Name. Master Thesis Title, academic year

- Stergios Xairistanidis, Beacommender: A Sensor-based Recommender System for Smart Phones, 2015-2016
- Malakoudis Dimitrios, MOOC Recommendation through Enhanced Matrix Factorization Techniques, 2015-2016
- Georgia Papagianni, Recommendation Algorithms in Twitter, 2015-2016
- Evaggelia Theodoridou, Link Prediction in Social Networks with Graph Mining, 2015-2016
- Zioupos Andreas. Dimensionality Reduction in Social Networks, 2014-2015
- Aggeliki Mitsou, Effective Management of Waiting Lines for Banks: DoNotWait.gr Case Study, 2015-2016
- Mavromati Styliani. Anomaly Detection from Big and Open Data, 2014-2015

- Misirgi Eleni. Advertising and Cross-selling in Social Media, 2013-2014
- Nikopoulos Dimitris. Behavioural Analytics and Social Mining, 2013-2014
- Tsiptsas Naoum. Data Mining for Economic Crisis Detection, 2013-2014
- Dimitrios Ntempos. A Survey on Location-based Social Networks, 2012-2013
- Emmanouil Daskalakis. MapReduce for Recommender Systems, 2012-2013
- Antonios Krinis. Location-based Social Networks Website, 2011-2012
- Foivos Koliopoulos. Data Mining with SQL Server and R Environments, 2011-2012
- Athanasios Floros. A Recommendation Engine for Academic Jobs, 2011-2012
- Pantelis Logginidis. Data Mining for Business Intelligence, 2010-2011
- Christos Perentis. Link Prediction in Multi-Modal Social Networks, 2010-2011
- Ivaylo Kehayov. Text Data Mining, 2010-2011
- Nikolaos Mantas. Web Data Mining in Social Networks, 2009-2010

University of Western Macedonia, Greece

2008 - 2011

Adjunct Assistant Professor, Department of Computer Engineering and Tele-communications

Courses taught in Academic years 2008-2009, 2009-2010, 2010-2011

- Databases (B.Sc., Autumn semester 2008)
- Internet Programming (B.Sc., Spring semester 2009)
- Advanced Databases (B.Sc., Autumn semester 2010)
- Advanced Software Engineering (B.Sc., Spring semester 2011)

PUBLICATIONS

Greek Textbooks

1. Παναγιώτης Συμεωνίδης, (2023). Ευφυή Συστήματα Συστάσεων. Αθήνα, Κάλλιπος, Ανοικτές Ακαδημαϊκές Εκδόσεις. Διαθέσιμο στο: <http://dx.doi.org/10.57713/kallipos-156>
ISBN: 978-618-5726-37-9
2. Παναγιώτης Συμεωνίδης, Γούναρης Αναστάσιος, “*Βάσεις Αποθήκες και Εξόρυξη Δεδομένων: Στο Εργαστήριο με τον SQL Server*” (Data bases, Data warehouses, and Data Mining with SQL Server) Αθήνα: Ελληνικά Ακαδημαϊκά Ηλεκτρονικά Συγγράμματα. Available to: <http://hdl.handle.net/11419/276>, ISBN: 978-960-603-021-5

International Books/Monographs

1. P. Symeonidis. “Deep Recommender Systems with Python” 324 pages, self-production (it can be sent as a pdf after request) <https://www.panagiotissymeonidis.com/enbook/index.html>
2. P. Symeonidis, A. Zioupos: “*Matrix and Tensor Factorization Techniques for Recommender Systems*”, Series: Springer Briefs in Computer Science, 2017, 102 pages, 29 b/w illustrations, 22 illustrations in colour, ISBN, 978-3-319-41356-3 DOI: 10.1007/978-3-319-41357-0
3. P. Symeonidis, D. Ntempos, Y. Manolopoulos: “*Recommender Systems for Location-based Social*

Networks”, Series: Springer Briefs in Electrical and Computer Engineering, 2014, 118 pages, 41 illus., Softcover, ISBN 978-1-4939-0285-9

4. L. Balby Marinho, A. Hotho, R. Jäschke, A. Nanopoulos, S. Rendle, L. Schmidt-Thieme, G. Stumme, P. Symeonidis: “*Recommender Systems for Social Tagging Systems*”, Series: Springer Briefs in Electrical and Computer Engineering, 2012, 115 pages, 35 illus., Softcover, ISBN 978-1-4614-1893

Journal Publications

1. Symeonidis, P., Chaltsev, D., Berbague, C. and Zanker, M., 2022. Sequence-aware news recommendations by combining intra-with inter-session user information. *Information Retrieval Journal*, 25(4), pp.461-480. **(Impact Factor in 2022: 1.615)**
2. Symeonidis, P., Chairistanidis, S. & Zanker, M. Safe, effective and explainable drug recommendation based on medical data integration. *User Modelling and User-adapted Interaction* (2022). <https://doi.org/10.1007/s11257-022-09342-x> **(Impact Factor in 2022: 3.639)**
3. Berbague, C.E., Seridi-Bouchelaghem, H., El-Islem, K.N., Symeonidis, P. and Zanker, M., 2022. An evolutionary-based approach for providing accurate and novel recommendations. *International Journal of Business Intelligence and Data Mining*, 21(2), pp.129-148. **(Impact Factor in 2022: 2.114)**
4. Zheng, Y., Chen, L., Zanker, M., Symeonidis, P.: JIIS preface for the special issue on advances in recommender systems. *Journal of Intelligent Information Systems (Springer)* 58(2): 223-225 (2022) **(Impact Factor in 2022: 2.738)**
5. Symeonidis, P., Kirjackaja, L., Zanker, M. “Session-based News Recommendations using SimRank on multi-modal Graphs”, *Expert Systems with Applications (Elsevier)*, 2021 <https://doi.org/10.1016/j.eswa.2021.115028> **(Impact Factor in 2022: 8.665)**
6. Berbague, C., Karabadjji, N., Seridi, H., Symeonidis, P., Manolopoulos, Y., Dhifli, W. “An overlapping clustering approach for precision, and novelty-aware recommendation”, *Expert Systems with Applications (Elsevier)* vol. 177, 2021 **(Impact Factor in 2022: 8.665)**
7. Panagiotis Symeonidis, Lidija Kirjackaja, Markus Zanker: Session-aware news recommendations using random walks on time-evolving heterogeneous information networks. *User Model. User Adapt. Interact.* 30(4): 727-755 (2020) **(Impact Factor in 2022: 3.639)**
8. Makbule Gulcin Ozsoy, Diarmuid O'Reilly-Morgan, Panagiotis Symeonidis, Elias Z. Tragos, Neil Hurley, Barry Smyth, Aonghus Lawlor: MP4Rec: Explainable and Accurate Top-N Recommendations in Heterogeneous Information Networks. *IEEE Access* (8) pages: 181835-181847 (2020) **(Impact Factor in 2022: 3.476)**
9. Coba, L., Symeonidis, P., & Zanker, M. “Personalised Novel and Explainable Matrix Factorization”. *Data & Knowledge Engineering (Elsevier)*, vol. 122, pp. 142-158, <https://doi.org/10.1016/j.datak.2019.06.003>, 2019 **(Impact Factor in 2022: 2.211)**

10. Symeonidis, P., Chairistanidis, S. (2019) “OmniRank: Learning to Recommend based on Omni-traversal of Heterogeneous Graphs”. *Social Network Analysis and Mining* (Springer), vol. 9, no. 1, pp=39-63, <https://doi.org/10.1007/s13278-019-0585-7>, 2019 **(Impact Factor in 2022: 1.528)**
11. Coba, L., Symeonidis, P., & Zanker, M. “Counteracting the Filter Bubble in Recommender Systems: Novelty-aware Matrix Factorization”, *Intelligenza Artificiale* (IOS Press) vol. 13, no. 1, pp. 37-47, 2019 **(Impact Factor in 2022: Not Available)**
12. Symeonidis, P., Coba, L., Zanker, M. “Improving Time-aware Recommendations in Open Source Packages”, *International Journal on Artificial Intelligence Tools* (World Scientific), vol. 28, no. 6., pp. 1-21. <http://dx.doi.org/10.1142/S0218213019600078>, 2019 **(Impact Factor in 2022: 1.265)**
13. P. Symeonidis, D. Malakoudis: “Multi-Modal Matrix Factorization with Side Information for Recommending Massive Open Online Courses”, *Expert Systems with Applications* (Elsevier), Vol. 118, pp. 261 – 271, 2019 **(Impact Factor in 2022: 8.665)**
14. P. Kefalas, P. Symeonidis, Y. Manolopoulos: “Recommendations Based on a Heterogeneous Spatio-temporal Social Network”, *World Wide Web*, Vol. 21, N. 2, pp. 345-371, 2017. **(Impact factor in 2017: 1.405)**
15. P. Kefalas, P. Symeonidis, Y. Manolopoulos: “A Graph-based Taxonomy of Recommendation Algorithms and Systems in LBSNs”, *IEEE Transactions on Knowledge & Data Engineering*, Vol.28, N.3, pp. 604-622, 2016. **(Impact factor in 2016: 3.438)**
16. P. Symeonidis: “ClustHOSVD: Item Recommendation by Combining Semantically-enhanced Tag Clustering with Tensor HOSVD”, *IEEE Transactions on Systems, Man & Cybernetics - Part A: Systems & Humans*, Vol. 46, No. 9, 2016. **(Impact factor in 2016: 2.350)**
17. M. Sattari, I. Toroslu, P. Karagoz, P. Symeonidis, Y. Manolopoulos: “Extended Feature Combination Model for Recommendations in Location-based Mobile Services”, *Knowledge & Information Systems*, Vol.3, N.44, pp. 629-661, 2015. **(Impact factor in 2015: 1.702)**
18. Z.F. Siddiqui, E. Tiakas, P. Symeonidis, M. Spiliopoulou, Y. Manolopoulos: “Learning Relational User Profiles and Recommending Items as their Preferences Change”, *International Journal of AI Tools*, Vol.24, N.2, 2015. **(impact factor in 2015: 0.530)**
19. P. Symeonidis, E. Tiakas: “Transitive Node Similarity: Predicting and Recommending Links in Signed Social Networks”, *World Wide Web*, Vol.17, No.4, pp.743-776, 2014. **(impact factor in 2014: 1.474)**
20. P. Symeonidis, E. Tiakas, Y. Manolopoulos: “A Unified Framework for Link and Rating Prediction in Multi-modal Social Networks”, *International Journal of Social Network Mining*, Vol.1, No.3/4, 2013.
21. P. Symeonidis, N. Mantas: “Spectral Clustering for Link Prediction in Social Networks with Positive and Negative Links”, *Social Network Analysis & Mining*, Vol.3, No.4, pp.1433-1447, 2013. **(impact factor in 2013: 0.503)**

22. P. Symeonidis, N. Iakovidou, N. Mantas, Y. Manolopoulos: "From Biological to Social Networks: Link prediction based on Multi-way Spectral Clustering", *Data & Knowledge Engineering*, Vol.87, pp.226-242, 2013. **(impact factor in 2013: 1.489)**
23. P. Longinidis, P. Symeonidis: "Corporate Dividend Policy Determinants: Intelligent versus a Traditional Approach", *Intelligent Systems in Accounting, Finance & Management*, Vol.20, No.2, pp.111-139, 2013.
24. A. Papadimitriou, P. Symeonidis, Y. Manolopoulos: "Fast and Accurate Link Prediction in Social Networking Systems", *Journal of Systems & Software*, Vol.85, No.9, pp.2119-2132, 2012. **(impact factor in 2012: 1.135)**
25. A. Papadimitriou, P. Symeonidis, Y. Manolopoulos: "A Generalized Taxonomy of Explanations Styles for Traditional and Social Recommender Systems", *Data Mining & Knowledge Discovery*, pp.1-29, 2011. **(impact factor in 2011: 1.545)**
26. P. Symeonidis, A. Nanopoulos, Y. Manolopoulos: "A Unified Framework for Providing Recommendations in Social Tagging Systems Based on Ternary Semantic Analysis", *IEEE Transactions on Knowledge & Data Engineering*, Vol.22, No.2, 2010. **(impact factor in 2010: 1.851)**
27. A. Nanopoulos, D. Rafailidis, P. Symeonidis, Y. Manolopoulos: "MusicBox: Personalized Music Recommendation based on Cubic Analysis of Social Tags", *IEEE Transactions on Audio, Speech & Language Processing*, Vol.18, No.2, 2010. **(impact factor in 2010: 1.668)**
28. A. Deligiaouri, P. Symeonidis: "Skai (TV) - YouTube Debate": A New Era of Internetized Television Politics", *International Journal of E-Politics*, Vol.1, No.2, 2010 (publisher: IGI global).
29. P. Symeonidis, A. Deligiaouri: "Recommending Posts in Political Blogs based on Tensor Dimensionality Reduction", *International Journal of Engineering Intelligent Systems*, Vol.17, No.2-3, 2009. **(impact factor in 2009: 0.205)**
30. P. Symeonidis, A. Nanopoulos, Y. Manolopoulos: "Providing Justifications in Recommender Systems", *IEEE Transactions on Systems, Man & Cybernetics - Part A: Systems & Humans*, Vol.38, No.6, 2008. **(impact factor in 2008: 1.350)**
31. P. Symeonidis, A. Nanopoulos, A. Papadopoulos, Y. Manolopoulos: "Nearest-biclusters Collaborative Filtering with Constant and Coherent Values", *Information Retrieval*, Vol.11, No.1, 2008. **(5-year impact factor in 2008: 1.396)**
32. P. Symeonidis, A. Nanopoulos, A. Papadopoulos, Y. Manolopoulos: "Collaborative Filtering Systems: Combining Effectiveness and Efficiency", *Expert Systems with Applications*, Vol.34, No.4, pp.51-75, 2008. **(impact factor in 2008: 2.596)**

Book Chapters

1. G. Sottocornola, F. Stella, P. Symeonidis, M. Zanker, I. Krajger, R. Faullant, and E. Schwarz: Identifying Innovative Idea Proposals with Topic Models—A Case Study from SPA Tourism. In: Sigala M., Rahimi R., Thelwall M. (eds) *Big Data and Innovation in Tourism, Travel, and Hospitality*. Springer, Singapore, pp 115-133, 2019
2. P. Symeonidis, D. Malakoudis: “MooRec.com: Massive Open Online Courses Recommender System” chapter in the book entitled “*Collaborative Recommendations: Algorithms, Practical Challenges and Applications*”, World Scientific, pp. 627–651, 2018.
3. P. Symeonidis: “Matrix and Tensor Factorization in Recommender Systems”, chapter in the book entitled “*Graph-based Social Media Analysis*”, by I. Pitas (ed.), CRC Press, Taylor & Francis group, Chapman & Hall/CRC, pp. 187-210, 2015.
4. L. Marinho, A. Nanopoulos, L. Schmidt-Thieme, R. Jaschke, A. Hotho, G. Stumme, P. Symeonidis: “Social Tagging Recommender Systems”, chapter in book entitled “*Recommender Systems Handbook*”, by F. Ricci, L. Rokach, B. Shaphira, P. B. Kantor (eds.): LNCS Springer Book, pp.615-644, 2011.
5. A. Deligiaouri, P. Symeonidis: “Internetized Television Debates: Enhancing Citizens’ Participation”, chapter in book entitled “*E-Politics and Organizational Implications of the Internet: Power, Influence and Social Change*” by C.R. Livermore (ed.), IGI Global, 2011.
6. P. Symeonidis, A. Nanopoulos, A. Papadopoulos, Y. Manolopoulos: “Nearest-biclusters Collaborative Filtering based on constant values”, chapter in book entitled “*Advances in Web Mining and Web Usage Analysis*”, by O. Nasraoui, O. Zaiane, M. Spiliopoulou, M. Mobasher, B. Masand, P. Yu (eds.), LNCS Springer, Vol.4811, pp.36-55, 2007.

Conference Papers

1. Panagiotis Symeonidis, Grigorios Manitaras, Markus Zanker: Accurate and Safe Drug Recommendations based on Singular Value Decomposition. CBMS 2023: 163-168
2. Panagiotis Symeonidis, Luca Bellinazzi, ChemsEddine Berbague, Markus Zanker: Safe and Effective Recommendation of Drug Combinations based on Matrix Co-Factorization. CBMS 2023: 634-639

3. Symeonidis, P., Chairistanidis, S., & Zanker, M. (2022, November). Deep Reinforcement Learning for Medicine Recommendation. In 2022 IEEE 22nd International Conference on Bioinformatics and Bioengineering (BIBE) (pp. 85-90). IEEE.
4. Symeonidis, P., Kostoulas, T., Danilatou, V., Andras, C., & Chairistanidis, S. (2022, November). Mortality Prediction and Safe Drug Recommendation for Critically-ill Patients. In 2022 IEEE 22nd International Conference on Bioinformatics and Bioengineering (BIBE) (pp. 79-84). IEEE.
5. Symeonidis, P., Kirjackaja, L., Zanker, M. "Session-based Recommendation along with the Session Style of Explanation", European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML/PKDD), pp. 147-162, Grenoble France, 2022
6. Panagiotis Symeonidis, Stergios Chairistanidis, Markus Zanker: Recommending What Drug to Prescribe Next for Accurate and Explainable Medical Decisions. IEEE Computer-based Medical Systems (IEEE CBMS 2021): 213-218
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(RecSys), New York, 2009.

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45. P. Symeonidis, A. Nanopoulos, A. Papadopoulos, Y. Manolopoulos: “Nearest-Biclusters Collaborative Filtering”, *Proceedings of the WebKDD Workshop held in conjunction with KDD*, pp.15-25, Philadelphia, PA, 2006.
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48. P. Symeonidis, A. Nanopoulos, A. Papadopoulos, Y. Manolopoulos: “Scalable Collaborative Filtering Based on Latent Semantic Indexing”, *Proceedings of the AAAI Workshop on Intelligent Techniques for Web Personalization (ITWP)*, pp.1-9, Boston, MA, 2006.

JOURNAL AND CONFERENCES QUALITY INDICES OF THE PUBLISHED WORK

P. Symeonidis has published 32 papers in journals and the Table below presents the Impact Factor of the Journal in the year that his paper got accepted from the journal. As shown, there are 24 out the 33 journal papers, with an impact factor more than 1.134.

Journal Title	Impact Factor	Year
Expert Systems with Applications (Elsevier) * 2 publications in 2022	8.665	2022
Expert Systems with Applications (Elsevier)	5.835	2019
User Modelling and User-adapted Interaction	4.412	2020
User Modelling and User-adapted Interaction	3.639	2022
IEEE Access	3.476	2022
IEEE Transactions on Knowledge & Data Engineering	3.438	2016
Journal of Intelligent Information Systems	2.738	2022
Expert Systems with Applications (Elsevier)	2.596	2008
IEEE Transactions on Systems, Man & Cybernetics - Part A: Systems & Humans	2.35	2016
Data & Knowledge Engineering (Elsevier)	2.211	2022
International Journal of Business Intelligence and Data Mining	2.114	2022
IEEE Transactions on Knowledge & Data Engineering	1.851	2010
Knowledge & Information Systems	1.702	2015
IEEE Transactions on Audio, Speech & Language Processing	1.668	2010
Information Retrieval Journal	1.615	2022
Data Mining & Knowledge Discovery	1.545	2011
Social Network Analysis and Mining (Springer)	1.528	2022
Social Network Analysis & Mining	1.489	2013
World Wide Web	1.474	2014
World Wide Web	1.405	2017
Information Retrieval Journal	1.396	2008
IEEE Transactions on Systems, Man & Cybernetics - Part A: Systems & Humans	1.35	2008
International Journal on Artificial Intelligence Tools (World Scientific)	1.265	2022
Journal of Systems & Software	1.135	2012
International Journal of AI Tools	0.53	2015
International Journal on Artificial Intelligence Tools	0.53	2015
Social Network Analysis & Mining	0.503	2013
International Journal of Engineering Intelligent Systems	0.205	2009

Finally, summarizing the quality of the published work of P. Symeonidis in conferences, as shown in the Table below, he has published 6 papers in **Top-ranked** conferences (acceptance rate $\leq 20\%$) and 10 papers in **Highly-ranked** conferences (acceptance rate $\leq 40\%$), where «acceptance rate» is the ratio of the accepted papers of a conference to the total number of papers that are submitted in a year.

Conference	Acceptance Ratio
ACM RecSys 2020	18%
ACM RecSys 2019	19%
ACM RecSys 2009	19%
ACM RecSys 2010	19%
ACM RecSys 2011	20%
User Modelling 2007	20%
ECML/PKDD 2014	22%
IUI 2019	23%
ADBIS 2012	26%
ECML/PKDD 2022	26%
IEEE IDEAS 2006	26%
ADBIS 2013	28%
ACM RecSys 2008	30%
ACM SIGSPATIAL 2011 (LBSN workshop)	38%
ACM RecSys 2016 (tutorial presentation)	40%
ACM KDD 2006 (WebKDD workshop)	40%

PRESENTATIONS, TUTORIALS, INVITED LECTURES AND WORKSHOP CO-ORGANIZER

1. Tutorial in ACM Conference on Recommender Systems in Bari, October 2024. Title: Deep Recommendation Using Graphs.
2. Invited Talk on Wednesday 5/4/2023 at University of Magdeburg with the title Explaining Drug Recommendations with Deep Learning
3. Invited Talk in November 2, 2022 at Insight Centre for Data Analytics, UCD, Dublin, Ireland with the title “Making Predictions for Personalized Health”.
4. Tutorial in IEEE ICWE 2021. Title "Similarity Search, Recommendation and Explainability over Graphs in Different Domains: Social Media, News, and Health Industry"
<https://icwe2021.webengineering.org/>.

5. Publicity chair of ACM RecSys 2020, which was held in Rio de Janeiro, Brazil, 22nd-26th September 2020.
6. Co-chair of the SAC 2019 Technical Track on Recommender Systems: Theory, User Interactions and Applications.
7. Tutorial in WIMS conference 2018. Title: Contextual-Aware Recommender Systems based on Matrix Decompositions and Random Walks on Graphs.
8. Tutorial in ACM Summer School on Recommender Systems from 21/8/2017-25/8/2017 in Bolzano. Title: Matrix and Tensor Factorization Techniques for Recommender Systems.
9. Tutorial in Professional Technical School of Bolzano “Landesberufsschule für Handwerk und Industrie” for the “Tag der offenen Tür” (contact person: Kuen, Thomas, informatik), 2017.
10. Tutorial in ACM Conference on Recommender Systems in Boston, September 2016. Title: Matrix and Tensor Decompositions for Recommender Systems.
11. GIS and location-based services - 9th workshop "Computer Science Research Meets Business" - 23 Nov 2017. Title: CheckInShop: A Recommender System for Micro-location Services.

ENTREPRENEURSHIP & PATENTS

Co-founder of the following start-ups:

- www.moorec.com
This is a website for recommending moocs (massive open online courses) to users based on their CV and their ideal job description.
- www.checkinexpo.com (not active anymore)
This is a website for shops to provide “proximity and contextual marketing” to their smart-phone clients inside their physical store by using beacon technology.

Co-creator of the following web systems:

1. <http://drugrec.inf.unibz.it>
drugrec is a website that provides treatment recommendations of Covid-19 patients along with explanations.
2. <https://cran.r-project.org/web/packages/rrecsys/index.html>
rrecsys is an open source library in R to evaluate several recommendation algorithms using time-dependent and time-independent evaluation protocols.
3. <http://metarec.inf.unibz.it>
A recommender system for graph-based recommendations and meta-path based explanations.
4. <http://jobrec.inf.unibz.it>
A job recommendation system (in greek)
5. <http://adsrec.inf.unibz.it>
A news web site with advertisement recommendations (in greek)
6. <https://skillrec.inf.unibz.it>

A project recommendation website based on the skills of the researchers

COMMUNITY SERVICE

Editorial Board and Committee memberships in journals/conferences:

1. Member of the editorial board of the international journal Information Technology & Tourism (Springer)
2. Member of the Editorial Board of the international journal of Intelligent Information Systems (Springer)
3. Senior Program Committee member of the Recommender System (RecSys) conference
4. Senior Program Committee member of the International Joint Conference in Artificial Intelligence (IJCAI)
5. Member of the Program Committee of the WWW conference, track on User Modelling, Recommendation and Personalization
6. Member of the Program Committee of the ECML PKDD conference
7. Member of the Program Committee of the East-European Conference on Advances in Databases and Information Systems (ADBIS)

Reviewer in journals/conferences

1. ACM Transactions on Recommender Systems (ACM TORS)
2. ACM Transactions on Internet Technology (ACM TOIT)
3. ACM Transactions on Intelligent Systems and Technology (ACM TIST)
4. ACM Transactions on the Web (ACM TWEB)
5. IEEE Transactions on Knowledge Discovery & Engineering (IEEE TKDE)
6. IEEE Transactions on System, Man & Cybernetics
7. The Computer Journal (Oxford Journals)
8. Information Systems (ELSEVIER)
9. Operational Research: An International Journal
10. European Conference on Machine Learning and Principles & Practice of Knowledge Discovery in Databases (ECML/PKDD)
11. International Conference on Very Large Data Bases (VLDB)
12. International Conference on Knowledge Discovery from Databases (Workshop on Social Network Analysis - SNAKDD)
13. International Conference on Artificial Neural Networks (ICANN)

LANGUAGES

- **English:** Excellent, C2 Level
- **German:** Advanced, C1 Level
- **Italian:** Fluent, B1 level
- **Greek:** (mother tongue)