

UMUTCAN SERLES, PHD



formerly Umutcan Şimşek

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MAIN AREAS OF RESEARCH

- Domain-specific patterns for semantic annotations and Knowledge Graphs
- Goal-oriented Dialog Systems
- Knowledge Graph construction with declarative mappings
- Knowledge Graph Maintenance
- Lightweight Semantic Web Services
- schema.org and semantic annotations
- Synergies between Large Language Models and Knowledge Graphs

EDUCATION

Doctor of Philosophy <i>Computer Science</i> University of Innsbruck Dissertation: Service-driven Goal-oriented Dialog Systems	2016 – 2021 Innsbruck, Austria
Master of Science <i>Computer Engineering</i> Ege University	2013 – 2015 Izmir, Turkey
Master of Science <i>Computer Science</i> Technische Hochschule Mittelhessen	2013 – 2015 Giessen, Germany
Bachelor of Science <i>Computer Engineering</i> Ege University	2009 – 2013 Izmir, Turkey

RELEVANT WORK EXPERIENCE

Research and Development Specialist Onlim GmbH	December 2023 – Innsbruck, Austria
Postdoctoral Researcher and Lecturer University of Innsbruck	July 2021 – Innsbruck, Austria
Scientific Consultant Open Data Tourism Alliance	October 2021 –
Researcher and Tutor University of Innsbruck	November 2015 – July 2021 Innsbruck, Austria
Lead Software Developer Aura Informatics	June 2013 – November 2015 Izmir, Turkey

TEN KEY ACADEMIC PUBLICATIONS

1. Şimşek, Umutcan; Kärle, Elias, Angele, Kevin et al. (2023): A Knowledge Graph Perspective on Knowledge Engineering. SN COMPUT. SCI. 4(16). <https://doi.org/10.1007/s42979-022-01429-x>
2. Şimşek, Umutcan; Angele, Kevin; Kärle, Elias; Opdenplatz, Juliette; Sommer, Dennis; Umbrich, Jürgen; Fensel, Dieter (2021): Knowledge Graph Lifecycle: Building and Maintaining Knowledge Graphs. In: Proceedings of the 2nd International Workshop on Knowledge Graph Construction co-located with 18th Extended Semantic Web Conference (ESWC 2021). CEUR Workshop Proceedings 2873. <http://ceur-ws.org/Vol-2873/paper12.pdf>
3. Fensel, Dieter; Şimşek, Umutcan; Angele, Kevin; Huaman, Elwin; Kärle, Elias; Panasiuk, Oleksandra; Toma, Ioan; Umbrich, Jürgen; Wahler, Alexander (2020): Knowledge Graphs. Methodology, Tools and Selected Use Cases. Cham: Springer Nature. ISBN 978-3-030-37438-9. <https://www.springer.com/gp/book/9783030374389>
4. Şimşek, Umutcan; Angele, Kevin; Kärle, Elias; Panasiuk, Oleksandra; Fensel, Dieter (2020): Domain-Specific Customization of Schema.Org Based on SHACL. In: Pan, Jeff; Tamma, Valentina; d'Amato, Claudia; Janowicz, Krzysztof; Fu, Bo; Polleres, Axel; Seneviratne, Oshani; Kagal, Lalana: The Semantic Web – ISWC 2020. 19th International Semantic Web Conference, Athens, Greece, November 2–6, 2020, Proceedings, Part I. Cham: Springer Nature (= Information Systems and Applications, incl. Internet/Web, and HCI, 12506 / Lecture Notes in Computer Science, 12506)., ISBN 978-3-030-62418-7, pp. 585 - 600. https://link.springer.com/chapter/10.1007/978-3-030-62466-8_36 (**Best In-Use Paper Award**)
5. Şimşek, Umutcan; Umbrich, Jürgen; Fensel, Dieter (2020): Towards a Knowledge Graph Lifecycle: A pipeline for the population of a commercial Knowledge Graph. In: Qurator 2020. CEUR Workshop Proceedings 2535, No. 10. http://ceur-ws.org/Vol-2535/paper_10.pdf
6. Angele, Kevin; Fensel, Dieter; Huaman, Elwin; Kärle, Elias; Panasiuk, Oleksandra; Simsek, Umutcan; Toma, Ioan; Wahler, Alexander (in press): Semantic Web Empowered e-Tourism. In: Xiang, Z; Fuchs, M; Gretzel, U; Höpken, W: Handbook of e-Tourism. Cham: Springer Nature.
7. Şimşek, Umutcan; Kärle, Elias; Fensel, Dieter (2018): Machine Readable Web APIs with Schema.org Action Annotations. In: Proceedings of the 14th International Conference on Semantic Systems 10th – 13th of September 2018 Vienna, Austria. <https://www.sciencedirect.com/science/article/pii/S1877050918316302?via%3Dihub>
8. Kärle, Elias; Şimşek, Umutcan; Panasiuk, Oleksandra; Fensel, Dieter (2018): Building an Ecosystem for the Tyrolean Tourism Knowledge Graph. In: Pautasso, C; Sanchez-Figueroa, F; Systä, K.; Murillo Rodriguez, J. M.: Current Trends in Web Engineering. ICWE 2018 International Workshops, MATWEP, EnWot, KD-WEB, WEOD, TourismKG, Cáceres, Spain, June 5, 2018, Revised Selected Papers. Cham: Springer International Publishing (= Lecture Notes in Computer Science)., ISBN 978-3-030-03055-1, No. 25. <https://arxiv.org/abs/1805.05744>
9. Fotopoulou, Eleni; Zafeiropoulos, Anastasios; Terroso-Sáenz, Fernando; Şimşek, Umutcan; González-Vidal, Aurora; Tsiolis, George; Gouvas, Panagiotis; Liapis, Paris; Fensel, Anna; Skarmeta, Antonio (2017): Providing Personalized Energy Management and Awareness Services for Energy Efficiency in Smart Buildings. In: Sensors 17/9, No. 2054. <http://www.mdpi.com/1424-8220/17/9/2054/htm>
10. Kärle, Elias; Şimşek, Umutcan; Fensel, Dieter (2017): semantify. it, a Platform for Creation, Publication and Distribution of Semantic Annotations. In: Homenda, Wladyslaw; Roman, Dumitru: SEMAPRO 2017: The Eleventh International Conference on Advances in Semantic Processing. New York: Curran Associates, Inc., ISBN 978-1-61208-600-2, pp. 22 - 30. http://www.thinkmind.org/index.php?view=article&articleid=semapro_2017_2_10_30007 (**Best Paper Award**)

Most Important Peer Review Activities, Editorships and/or Memberships in Academic Organizations

1. Track Chair, 18. International Conference on Semantic Systems (SEMANTICS-EU 2022), Poster and Demo Track.
2. Program Committee Member of Extended Semantic Web Conference (ESWC).
3. Reviewer for the Semantic Web Journal.
4. Reviewer for the Journal of Universal Computer Science (J.UCS).
5. Reviewer for International Conference on Knowledge Engineering and Knowledge Management (EKAW).

Most Important Research Projects

1. MindLab Project: A methodology and tools for Knowledge Graphs in tourism domain to empower conversational agents. (09/2018 - 08/2020), privately funded, budget: 1 200 000 EUR.
<https://mindlab.ai>
2. ENTROPY: design of an innovative energy-aware IT ecosystem for motivating behavioural changes towards the adoption of energy efficient lifestyles, EU Horizon 2020, 09/2015 - 08/2018, Grant agreement ID: 649849, funding: 281 500 EUR <https://cordis.europa.eu/project/id/649849/>
3. OntoCommons: Ontology-driven data documentation for Industry Commons. EU Horizon 2020, 11/2021-10/2023, Grant agreement ID: 958371, funding: 131 812 EUR
<https://cordis.europa.eu/project/id/958371>
4. WISNAT: Conversational Access to Knowledge Graphs. (06.2022 - 05.2023), Forschungs- und Förderungsgesellschaft (FFG), Grant agreement ID: 897468 , funding: 198 000 EUR

Academic Awards

- netidee Grant Call 13: An award given to highly innovative master theses and dissertations. Dissertation topic: Dialogical Access to Lightweight Semantic Web Services, 2018