DR. THEOFANIS I. ARAVANIS

SHORT BIOGRAPHY

Dr. Theofanis I. Aravanis was born in Patras, Greece (1988). He holds a 5-year Diploma in Electrical and Computer Engineering from the University of Patras (2012), a Master of Science (MSc) from the National Technical University of Athens (2014), a Master in Business Administration (MBA) from the University of Patras (2016), and a PhD from the University of Patras on Logic-Based Artificial Intelligence (2019).

From 2019 to 2021, Dr. Aravanis conducted post-doctoral research on Logic-Based Artificial Intelligence (specifically Knowledge Representation and Reasoning), in the context of a biennial scholarship by the State Scholarships Foundation (IKY). As a Post-Doctoral Researcher, he has also worked for the European research project *C-ROADS* Greece on the development of machine-learning-based Intelligent Transportation Systems, used 24 hours a day by Attiki Odos SA for the real-time normalization of traffic flow, as well as for the National research project MANFISH, on the development of neuro-symbolic intelligent systems for the diagnosis and treatment of fish-diseases.

Dr. Aravanis' research interests lie in the field of Artificial Intelligence, working primarily on Knowledge Representation and Reasoning, Belief Change, Logic Programming, Machine Learning, and the application of Artificial-Intelligence methods for managing issues arising in modern Electrical Power Systems.

Dr. Aravanis has published over 35 academic articles in top-tier peer-reviewed journals and conferences (many of which are monographs), has written 2 University Textbooks, and has supervised more than 10 Diploma Theses. Moreover, he is a regular member of the Hellenic Artificial Intelligence Society and of the Technical Chamber of Greece.

From September 2019 until June 2023, Dr. Aravanis worked as an *Adjunct Lecturer* in the Department of Mechanical Engineering of the University of the Peloponnese, where he taught the courses "Electrical Machines (with Laboratory)", "Smart Buildings", "Robotics" and "Ergonomics". From December 2023 until February 2024, he continued his teaching work as an *Adjunct Assistant Professor* at the same Department, which honored him for two consecutive years (2022 & 2023) with the *Outstanding Teaching Award*.

Currently, Dr. Aravanis works as a Post-Doctoral Researcher for the research project *SAFE-AORTA*, on the development of an intelligent system that supports clinical decisions related to Abdominal Aortic Aneurysms.

Indicative Publications in Peer-Reviewed Journals

1. **Theofanis I. Aravanis**, "Collective belief revision", *Journal of Artificial Intelligence Research*, Vol. 78, pp. 1221-1247, 2023.

2. Konstantinos Kovas, Ioannis Hatzilygeroudis, Konstantinos Dimitropoulos, Georgios Spiliopoulos, Konstantinos Poulos, Evi Abatzidou, **Theofanis Aravanis**, Aristeidis Ilias, Grigorios Kanlis, and John Theodorou, "Using level-based multiple reasoning in a Web-based intelligent system for the diagnosis of farmed fish diseases", *Applied Sciences*, Vol. 13, 2023.

3. **Theofanis Aravanis**, "Deductive belief change", *Annals of Mathematics and Artificial Intelligence*, Vol. 91, pp. 489-515, 2023.

4. **Theofanis Aravanis**, "Generalizing Parikh's criterion for relevance-sensitive belief revision", *ACM Transactions of Computational Logic*, Vol. 24, Article No. 18, 2023.

5. **Theofanis Aravanis** and Pavlos Peppas, "Theory-relational belief revision", *Annals of Mathematics and Artificial Intelligence*, Vol. 90, pp. 573-594, 2022.

6. **Theofanis Aravanis**, "An epistemological study of theory change", *Bulletin of the Section of Logic*, Vol. 51, pp. 1-26, 2022.

7. **Theofanis Aravanis**, "An ASP-based solver for parametrized-difference revision", *Journal of Logic and Computation*, Vol. 32, pp. 630-666, 2021.

8. **Theofanis I. Aravanis**, "Relevance in belief update", *Journal of Artificial Intelligence Research*, Vol. 72, pp. 251-283, 2021.

9. **Theofanis Aravanis**, "On uniform belief revision", *Journal of Logic and Computation*, Vol. 30, pp. 1357-1376, 2020.

10. **Theofanis I. Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "Incompatibilities between iterated and relevance-sensitive belief revision", *Journal of Artificial Intelligence Research*, Vol. 69, pp. 85-108, 2020.

11. **Theofanis I. Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "A study of possible-worlds semantics of relevance-sensitive belief

revision", *Journal of Logic and Computation*, Vol. 30, pp. 1125-1142, 2020.

12. **Theofanis I. Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "Full characterization of Parikh's relevance-sensitive axiom for belief revision", *Journal of Artificial Intelligence Research*, Vol. 66, pp. 765-792, 2019.

13. **Theofanis Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "An investigation of parametrized difference revision operators", *Annals of Mathematics and Artificial Intelligence*, 2019.

Indicative Publications in Peer-Reviewed Conferences

1. **Theofanis Aravanis**, Aristeidis Ilias, Ioannis Hatzilygeroudis, and Georgios Spiliopoulos, "Predicting fish-mortality: Artificial Neural Networks vs Symbolic Regression", *Proceedings of the 14th International Conference on Information, Intelligence, Systems and Applications* (IISA 2023), 2023.

2. **Theofanis Aravanis**, Andreas Petratos, Georgia Douklia, and Efpraxia Plati, "Search problems in contemporary power grids", *Proceedings of the 22nd International Conference on Engineering Applications of Neural Networks* (EANN 2021), pp. 331-342, 2021.

3. **Theofanis Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "Modelling belief-revision functions at extended languages", *Proceedings of the 24th European Conference on Artificial Intelligence* (ECAI 2020), pp. 601-607, 2020.

4. **Theofanis Aravanis**, Andreas Petratos, and Georgia Douklia, "An ASP-based approach for phase balancing in power electrical systems", *Proceedings of the 21st International Conference on Engineering Applications of Neural Networks* (EANN 2020), pp. 511-520, 2020.

5. **Theofanis Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "Observations on Darwiche and Pearl's approach for iterated belief revision", *Proceedings of the 28th International Joint Conference on Artificial Intelligence* (IJCAI 2019), pp. 1509-1515, 2019.

6. **Theofanis I. Aravanis**, Tryfon-Chrysovalantis I. Aravanis, and Polydoros N. Papadopoulos, "Fault diagnosis in Direct Current electric motors via an Artificial Neural Network", *Proceedings of the 20th International Conference on Engineering Applications of Neural Networks* (EANN 2019), pp. 488-498, 2019.

7. **Theofanis Aravanis**, Konstantinos Demiris, and Pavlos Peppas, "Legal reasoning in Answer Set Programming", *Proceedings of the 2018 IEEE 30th International Conference on Tools with Artificial Intelligence* (ICTAI 2018), pp. 302-306, 2018.

8. **Theofanis Aravanis**, Pavlos Peppas, and Mary-Anne Williams, "Epistemic-entrenchment characterization of Parikh's axiom", *Proceedings of the 26th International Joint Conference on Artificial Intelligence* (IJCAI 2017), pp. 772-778, 2017.

9. **T. I. Aravanis**, E. C. Pyrgioti, and I. F. Gonos, "Lightning-induced overvoltages in the Hellenic electricity distribution network", *Proceedings of the 2016 IEEE 5th International Conference on High Voltage Engineering and Application* (ICHVE 2016), paper P-1-28, 2016.