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CURRENT RESEARCH INTERESTS

- Agent-oriented Software Engineering
- Model-driven development of software systems
- Domain-specific (modeling) languages (DSLs / DSMLs)
- Semantic Web and Semantic Web Services
- Software development processes and methodologies

PUBLICATIONS

Journal Articles

- [1] **Kardas, G.**, Tezel, B. T. and Challenger, M. (2018) "[Domain-specific modelling language for belief-desire-intention software agents](#)", IET Software, vol. 12, no. 4, pp. 356-364, DOI: 10.1049/iet-sen.2017.0094.
- [2] Challenger, M., Tezel, B. T., Alaca, O. F., Tekinerdogan, B. and **Kardas, G.** (2018) "[Development of semantic web-enabled BDI multi-agent systems using SEA ML: an electronic bartering case study](#)", Applied Sciences, vol. 8, no. 5, pp. 1-32, DOI: 10.3390/app8050688.
- [3] **Kardas, G.** and Gomez-Sanz, J. J. (2017) "[Special issue on model-driven engineering of multi-agent systems in theory and practice](#)", Computer Languages, Systems & Structures, vol. 50, pp. 140-141, DOI: 10.1016/j.cl.2017.07.002 (Guest Editorial).
- [4] **Kardas, G.**, Bircan, E. and Challenger, M. (2017) "[Supporting the platform extensibility for the model-driven development of agent systems by the interoperability between domain-specific modeling languages of multi-agent systems](#)", Computer Science and Information Systems, vol. 14, no. 3, pp. 875-912, DOI: 10.2298/CSIS170113034K.
- [5] Challenger, M., **Kardas, G.** and Tekinerdogan, B. (2016) "[A systematic approach to evaluating domain-specific modeling language environments for multi-agent systems](#)", Software Quality Journal, vol. 24, no. 3, pp. 755-795, DOI: 10.1007/s11219-015-9291-5.
- [6] Challenger, M., Mernik, M., **Kardas, G.** and Kosar, T. (2016) "[Declarative specifications for the development of multi-agent systems](#)", Computer Standards & Interfaces, vol. 43, pp. 91-115, DOI: 10.1016/j.csi.2015.08.012.
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- [8] Yildirim, O. and **Kardas, G.** (2014) "[A multi-agent system for minimizing energy costs in cement production](#)", Computers in Industry, vol. 65, no. 7, pp. 1076-1084, DOI: 10.1016/j.compind.2014.05.002.

- [9] Getir, S., Challenger, M. and **Kardas, G.** (2014) "[*The formal semantics of a domain-specific modeling language for semantic web enabled multi-agent systems*](#)", International Journal of Cooperative Information Systems, vol. 23, no. 3, pp. 1-53, DOI: 10.1142/S0218843014500051.
- [10] Teket, K. D., Sayit, M. and **Kardas, G.** (2014) "[*Software agents for peer-to-peer video streaming*](#)", IET Software, vol. 8, no. 4, pp. 184-192, DOI: 10.1049/iet-sen.2013.0181.
- [11] Saritas, H. B. and **Kardas, G.** (2014) "[*A model driven architecture for the development of smart card software*](#)", Computer Languages, Systems & Structures, vol. 40, no.2, pp. 53-72, DOI: 10.1016/j.cl.2014.02.001.
- [12] Challenger, M., Demirkol, S., Getir, S., Mernik, M., **Kardas, G.** and Kosar, T. (2014) "[*On the use of a domain-specific modeling language in the development of multiagent systems*](#)", Engineering Applications of Artificial Intelligence, vol. 28, pp. 111-141, DOI: 10.1016/j.engappai.2013.11.012.
- [13] **Kardas, G.** (2013) "[*Model-driven development of multi-agent systems: a survey and evaluation*](#)", The Knowledge Engineering Review, vol. 28, Issue 4, pp. 479-503, DOI: 10.1017/S0269888913000088.
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- [19] **Kardas, G.** (2009) "[*Experience developing a healthcare smartcard system*](#)", Hospital Information & Technology Europe, vol. 2, no. 2, pp. 24-25 (Invited Article).
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Conference and Workshop Papers

- [1] Kucuk, H. and **Kardas, G.** (2018) "[*A Reverse Engineering Methodology for the Development of Belief-Desire-Intention Agents*](#)", In proceedings of the 7th Turkish Software Architecture Conference (UYMK 2018), November 29-30, 2018, Istanbul, Turkey, CEUR Workshop Proceedings (in Turkish) **(in press)**.
- [2] Soleymanzadeh, K., Bul, Y., Kulduk, S., Bagci, S. and **Kardas, G.** (2018) "[*A Modeling Environment for the Development of Business Process Rules with JsonLogic*](#)", In proceedings of the 7th Turkish Software Architecture Conference (UYMK 2018), November 29-30, 2018, Istanbul, Turkey, CEUR Workshop

Proceedings (in Turkish) **(in press)**.

- [3] Tezel, B. T. and **Kardas, G.** (2018) "[Towards Providing Debugging in the Domain-Specific Modeling Languages for Software Agents](#)", In proceedings of the 2nd International Workshop on Debugging in Model-Driven Engineering (MDEbug 2018), held in conjunction with ACM/IEEE 21st International Conference on Model Driven Engineering Languages and Systems (MODELS 2018), October 16, 2018, Copenhagen, Denmark, CEUR Workshop Proceedings, vol. 2245, pp. 538-540.
- [4] Silva, J., Barisic, A., Amaral, V., Goulao, M., Tezel, B. T., Alaca, O. F., Challenger, M. and **Kardas, G.** (2018) "[Comparing the Usability of two Multi-Agents Systems DSLs: SEA ML++ and DSML4MAS - Study Design](#)", In proceedings of the 3rd International Workshop on Human Factors in Modeling (HuFaMo 2018), held in conjunction with ACM/IEEE 21st International Conference on Model Driven Engineering Languages and Systems (MODELS 2018), October 15, 2018, Copenhagen, Denmark, CEUR Workshop Proceedings, vol. 2245, pp.770-777.
- [5] Firtina, U., Tezel, B. T., Challenger, M. and **Kardas, G.** (2018) "[Abstract and Concrete Syntaxes for Software Agent Environment Modeling in CArtAgO Infrastructure](#)", In proceedings of the 3rd International Conference on Computer Science and Engineering (UBMK 2018), September 20-23, 2018, Sarajevo, Bosnia and Herzegovina, IEEE Conference Publications **(in press)**.
- [6] Arslan, S. and **Kardas, G.** (2018) "[Modeling Device Tree Software](#)", In proceedings of the 12th Turkish National Software Engineering Symposium (UYMS 2018), September 10-12, 2018, Istanbul, Turkey, CEUR Workshop Proceedings, vol. 2201, pp. 1-12 (in Turkish) **(best paper award)**.
- [7] Tezel, B. T., Challenger, M. and **Kardas, G.** (2018) "[DSML4BDI: A Modeling Tool for BDI Agent Development](#)", In proceedings of the 12th Turkish National Software Engineering Symposium (UYMS 2018), September 10-12, 2018, Istanbul, Turkey, CEUR Workshop Proceedings, vol. 2201, pp. 1-8.
- [8] Akdal, B., Cabuk Keskin, Z. G., Ekinci, E. E. and **Kardas, G.** (2018) "[Model-driven Query Generation for Elasticsearch](#)", In proceedings of the 5th Workshop on Model Driven Approaches in System Development (MDASD 2018), held in conjunction with 2018 Federated Conference on Computer Science and Information Systems (FedCSIS 2018), September 9-12, 2018, Poznan, Poland, IEEE Conference Publications, pp. 853-862, DOI: 10.15439/2018F218.
- [9] Miranda, T., Challenger, M., Tezel, B. T., Alaca, O. F., Amaral, V., Goulao, M. and **Kardas, G.** (2018) "[Improving the Usability of a MAS DSML](#)", In proceedings of the 6th International Workshop on Engineering Multi-Agent Systems (EMAS 2018), held in conjunction with the 17th International Conference on Autonomous Agents and Multiagent Systems (AAMAS 2018), July 14, 2018, Stockholm, Sweden, pp. 1-16.
- [10] Arslan, S., Tezel, B. T., Challenger, M. and **Kardas, G.** (2018) "[Design and Implementation of an Alarm System Software with Android Things Operating System](#)", In proceedings of the 2nd International Scientific and Vocational Studies Congress - Engineering and Natural Sciences (BILMES EN-NAT 2018), July 5-8, 2018, Nevsehir, Turkey, pp. 1205-1210 (in Turkish).
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- [12] Konaray, S. K., Aras, G., Akcekoce, H., Alaca, O. F., Challenger, M. and **Kardas, G.** (2017) "[Development of a Semantic Web based Activity Recommender Software](#)", In proceedings of the 11th Turkish National Software Engineering Symposium (UYMS 2017), October 18-20, 2017, Antalya, Turkey, CEUR Workshop Proceedings, vol. 1980, pp. 65-77 (in Turkish).
- [13] Cakmaz, Y. E., Alaca, O. F., Durmaz, C., Akdal, B., Tezel, B., Challenger, M. and **Kardas, G.** (2017) "[Engineering a BDI Agent-based Semantic e-Barter System](#)", In proceedings of the 2nd International Conference on Computer Science and Engineering (UBMK 2017), October 5-8, 2017, Antalya, Turkey, IEEE Conference

Publications, pp. 1072-1077, DOI: 10.1109/UBMK.2017.8093474.

- [14] Arslan, S., Turk, E. and **Kardas, G.** (2017) "[A Study on the Use of Device Tree Structures for Embedded Software Development](#)", In proceedings of the 2nd International Conference on Computer Science and Engineering (UBMK 2017), October 5-8, 2017, Antalya, Turkey, IEEE Conference Publications, pp. 882-887, DOI: 10.1109/UBMK.2017.8093472 (in Turkish).
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- [22] Tosun, M. and **Kardas, G.** (2015) "[DSL4JavaCard: A Domain-specific Language for Java Card Platform](#)", In proceedings of the 9th Turkish National Software Engineering Symposium (UYMS 2015), September 9-11, 2015, Izmir, Turkey, CEUR Workshop Proceedings, vol. 1483, pp. 396-407 (in Turkish).
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- [53] **Kardas, G.** and Dikenelli, O. (2006) "[*Ongoing Modeling Language Studies for Multi-Agent Software Systems and an Evaluation of Their Semantic Web Support*](#)", In proceedings of the 15th Turkish Symposium on Artificial Intelligence and Neural Networks (TAINN 2006), June 21-24, 2006, Akyaka, Mugla, Turkey, pp. 199-206 (in Turkish).
- [54] Dikenelli, O., Erdur, R. C., **Kardas, G.**, Gümüş, Ö., Seylan, I., Gürcan, Ö., Tiryaki, A. M. and Ekinçi, E. E. (2006) "[*Developing Multi Agent Systems on Semantic Web Environment using SEAGENT Platform*](#)", In proceedings of the 6th International Workshop on Engineering Societies in the Agents World (ESAW 2005), October 26-28, 2005, Kusadasi, Turkey, Lecture Notes in Artificial Intelligence, vol. 3963, pp. 1-13, DOI: 10.1007/11759683_1.
- [55] **Kardas, G.**, Gümüş, Ö. and Dikenelli, O. (2005) "[*Applying Semantic Capability Matching into Directory Service Structures of Multi Agent Systems*](#)", In proceedings of the 20th International Symposium on Computer and Information Sciences (ISCIS 2005), October 26-28, 2005, Istanbul, Turkey, Lecture Notes in Computer Science, vol. 3733, pp. 452-461, DOI: 10.1007/11569596_48.
- [56] Erdur, R. C., Dikenelli, O., Önal, A., Gümüş, Ö., **Kardas, G.**, Bayrak, Ö. and Tetik, Y. E. (2005) "[*A Pervasive Environment for Location-Aware and Semantic Matching Based Information Gathering*](#)", In proceedings of the 20th International Symposium on Computer and Information Sciences (ISCIS 2005), October 26-28, 2005, Istanbul, Turkey, Lecture Notes in Computer Science, vol. 3733, pp. 352-361, DOI: 10.1007/11569596_38.
- [57] **Kardas, G.**, Gümüş, Ö. and Dikenelli, O. (2005) "[*A Case Study on Discovery, Matching and Dynamic Invocation of Semantic Web Services*](#)", In proceedings of the 2nd Turkish National Software Engineering Symposium (UYMS 2005), September 22-24, 2005, Ankara, Turkey, pp. 41-49 (in Turkish).

- [58] Dikenelli, O., Gümüs, Ö., Tiryaki, A. M. and **Kardas, G.** (2005) "[Engineering a Multi Agent Platform with Dynamic Semantic Service Discovery and Invocation Capability](#)", In proceedings of the 3rd German Conference on Multi-Agent System Technologies (MATES 2005), September 11-13, 2005, Koblenz, Germany, Lecture Notes in Artificial Intelligence, vol. 3550, pp. 141-152, DOI: 10.1007/11550648_13.
- [59] Erdur, R. C. and **Kardas, G.** (2005) "[Personalized Access to Semantic Web Agents Using Smart Cards](#)", In proceedings of the 11th European Conference on Parallel Processing (Euro-Par 2005), August 30 - September 2, 2005, Lisboa, Portugal, Lecture Notes in Computer Science, vol. 3648, pp. 1110-1119, DOI: 10.1007/11549468_121.
- [60] Dikenelli, O., Erdur, R. C., Gumus, O., Ekinci, E. E., Gurcan, O., **Kardas, G.**, Seylan, I. and Tiryaki, A. M. (2005) "[SEAGENT: A Platform for Developing Semantic Web Based Multi Agent Systems](#)", In proceedings of the 4th International Joint Conference on Autonomous Agents and Multiagent Systems (AAMAS 2005), July 25-29, 2005, Utrecht, The Netherlands, ACM Press, pp. 1271-1272, DOI: 10.1145/1082473.1082728.
- [61] Celikel, E. and **Kardas, G.** (2005) "[Design of a Secure Transmission Platform with Smart Card Supported Asymmetrical Encryption System](#)", In proceedings of Academic Informatics 2005, February 2-4, 2005, Gaziantep, Turkey, p. 94 (in Turkish).

Dissertation and Theses

- [1] **Kardas, G.** (2008) "[Model Driven Development of Semantic Web Enabled Multi-agent Systems](#)", Ph.D. Dissertation, Ege University, Turkey, 205 pages (in Turkish).
- [2] **Kardas, G.** (2003) "[Use of Smart Cards in Health Records](#)", M.Sc. Thesis, Ege University, Turkey, 249 pages (in Turkish).
- [3] **Kardas, G.**, Bara, G. and Demirezen, Z. (2001) "A Web based Hotel Reservation System", B.Sc. Thesis, Ege University, Turkey, 222 pages (in Turkish).

PROFESSIONAL ACTIVITIES

- Currently participating in the following projects:
 - [1] "**AgentDSM-Eval: Developing a Framework on Evaluating Domain-specific Modeling Languages for Multi-agent Systems**", 01.03.2017 – 01.03.2020, the Scientific and Technological Research Council of Turkey (TUBITAK) Academic Research Funding Program Directorate (ARDEB) Electrical, Electronics and Informatics Research Grant Committee (EEEAG) and the Portuguese Foundation for Science and Technology (FCT) funded bilateral research project (with project no: 115E591 and budget: ~\$91,000) (working as the principal investigator) (**acceptance rate of the related bilateral project call: 6%**)
 - [2] "**Model-driven Development of Device Tree Software for Different Embedded System Platforms**", 15.04.2018 – 15.04.2019, TUBITAK ARDEB-EEEAG funded research project (with project no: 117E553 and budget: ~\$5,000) (working as the principal investigator)
 - [3] "**SMARTBUS: Smart Integrated Solution for Public Transportation Bus Fleets**", 01.07.2018 – 30.06.2020, European Union (EU) EUREKA Initiative for Packaging & Integration of μ Devices & Smart Electronic Systems (EURIPIDES) labelled research and development project including 2 project partners from Turkey and United Kingdom (EURIPIDES project no: 16-0601 and budget: €835,000) (working as the consultant for the project partner Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co.) (This project was also supported by TUBITAK Technology and Innovation Funding Programs Directorate (TEYDEB) with project no: 9180028 and budget: ~\$240,000)
 - [4] "**Development of a SaaS Platform for Rule-based and Automatic Management of Business Processes**", 01.06.2018 – 01.06.2019, HERMES Communications Co.'s industrial research and development project (with budget: ~\$110,000) (working as the consultant)

- [5] **“ASSUME: Affordable Safe & Secure Mobility Evolution”**, 01.09.2015 – 31.12.2018, EU EUREKA Information Technology for European Advancement (ITEA) labelled research and development project including 38 project partners from France, Germany, Netherlands, Sweden and Turkey (ITEA project no: 14014 and budget: €21,505,000) (working as the consultant for the project partner KocSistem Information Communication Services Inc.) (This project was also supported by TUBITAK TEYDEB with project no: 9150181 and budget: ~\$1,550,000)
 - [6] **“A Study on the Model-driven Development of Internet of Things Software based on Contiki Operating System”**, 03.07.2017 – 03.07.2019, Research project funded by the Scientific Research Projects Directorate of Ege University (with project no: 17-UBE-002 and budget: ~\$7,600) (working as the researcher)
- Completed projects:
- [1] **“Scalable and Robust Rule Engine”**, 29.05.2018 – 29.11.2018, Four Mobile Information Technologies Co.’s industrial research and development project (with budget: ~\$650,000) (worked as the consultant)
 - [2] **“Supporting the Interoperability between Domain-specific Agent Modeling Languages with Horizontal Model Transformations”**, 01.06.2016 – 01.06.2018, Research project funded by the Scientific Research Projects Directorate of Ege University (with project no: 16-UBE-001 and budget: ~\$13,200) (worked as the principal investigator)
 - [3] **“Development of a Metamodel for Dexmo Software Platform”**, 01.11.2017 – 01.05.2018, Univera Computer Systems Co.’s industrial research and development project (with budget: ~\$80,000) (worked as the consultant)
 - [4] **“ModelWriter: Text & Model-Synchronized Document Engineering Platform”**, 01.10.2014 – 01.10.2017, EU EUREKA ITEA labelled research and development project including 9 project partners from France and Turkey (ITEA project no: 13028 and budget: €4,183,000) (worked as the consultant for the project partner KocSistem Information Communication Services Inc.) (This project was also supported by TUBITAK TEYDEB with project no: 9140014 and budget: ~\$1,573,000)
 - [5] **“Development of a CANBus-based Ecodriving System for Public Transport Bus Services”**, 01.07.2013 – 30.12.2014, Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co.’s industrial research and development project supported by TUBITAK TEYDEB (with project no: 3130609 and budget: ~\$340,000) (worked as the consultant)
 - [6] **“Model Driven Development of Composite Content Applications”**, 01.09.2012 – 01.01.2014, KocSistem Information Communication Services Inc. and Unit Information Technologies Research, Development and Automation Systems Co.’s bilateral industrial research and development project supported by TUBITAK TEYDEB (with project no: 3110712 and budget: ~\$460,000) (worked as the consultant)
 - [7] **“Development of an Agent based Alternative Path Selection Method for Peer-to-Peer Video Streaming Applications”**, 01.10.2011 – 01.10.2013, TUBITAK ARDEB-EEEAG funded research project (with project no: 111E022 and budget: ~\$99,000) (**received TUBITAK Project Performance Award in 2018**) (worked as the principal investigator)
 - [8] **“A Domain Specific Modeling Language for Semantic Web enabled Multi-agent Systems”**, 01.03.2010 – 01.03.2013, TUBITAK ARDEB-EEEAG and Slovenian Research Agency (ARRS) funded bilateral research project (with project no: 109E125 and budget: ~\$86,000) (**received TUBITAK Project Performance Award in 2017**) (worked as the principal investigator)
 - [9] **“Assessment and Performance Measurement of Semantic Service Discovery Methods on Mobile Platforms”**, 01.11.2009 – 01.11.2012, Research project funded by the Scientific Research Projects Directorate of Ege University (with project no: 2009/UBE/003 and budget: ~\$9,300) (worked as the principal

investigator)

- [10] **“Model Driven Development of Ontology Based Multi-Agent Systems”**, 01.10.2008 – 01.10.2010, TUBITAK ARDEB-EEEAG funded research project (with project no: 108E141 and budget: ~\$90,000) (worked as the researcher)
- [11] **“The Implementation of the Semantic Web Service Architecture and Testing of the Architecture on a Mobile Platform”**, 01.07.2006 – 01.07.2008, TUBITAK ARDEB-EEEAG funded research project (with project no: 106E008 and budget: ~\$85,000) (worked as the researcher)
- [12] **“Development of the Bandwidth Measurement Techniques for Wireless Local Area Networks”**, 01.09.2005 – 01.09.2008, Research project funded by the Scientific Research Projects Directorate of Ege University (with project no: 2005/UBE/001 and budget: ~\$16,000) (worked as the researcher)
- [13] **“Design and Implementation of a Secure Communication Platform with the Use of Smartcard Mobile Media Enabled Asymmetric Cryptography”**, 01.10.2004 – 04.07.2005, Research project funded by the Scientific Research Projects Directorate of Ege University (with project no: 2004/UBE/001 and budget: ~\$12,500) (worked as the researcher)
- [14] **“OPC (OLE for Process Control) based Data Process Control System Development for TUPRAS (Turkish Petroleum Refineries Co.) Aliaga Petroleum Refinery”**, 16.02.2004 – 25.02.2005, Turkish Petroleum Refineries Co. (TUPRAS) and Ege University International Computer Institute’s joint research project (funded by TUPRAS with budget: ~\$8,500) (worked as the researcher)
- [15] **“The Implementation of a Parallel Data Processing Platform on Linux based PC Clusters”**, 02.09.2002 – 26.10.2004, Research project funded by the Scientific Research Projects Directorate of Ege University (with project no: 2002/UBE/001 and budget: ~\$19,000) (worked as the researcher)

- Industrial consultancies for the following corporations:
 - [KocSistem Information Communication Services Inc.](#) (May 2015 – December 2017) (since May 2018)
 - [Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co.](#) (December 2012 – December 2014) (since November 2018)
 - [HERMES Communications Co.](#) (since June 2018)
 - Four Mobile Information Technologies Co. (May 2018 – November 2018)
 - [Univera Computer Systems Co.](#) (November 2017 – April 2018)
 - [Unit Information Technologies Research, Development and Automation Systems Co.](#) (November 2012 – December 2013)
- Editorial board member of [Computer Languages, Systems & Structures](#) journal
- Guest co-editor of Computer Languages, Systems & Structures journal’s special issue: [“Model-driven engineering of multi-agent systems in theory and practice”](#) (2017)
- Invited lecturer: A series of invited lectures was given on the topic “Model-driven Engineering and Multi-agent Systems” at University of Maribor, Faculty of Electrical Engineering and Computer Science, Maribor, Slovenia in between November 19-25, 2017 (The visit was co-funded by the European Social Fund and the Republic of Slovenia, Ministry of Education, Science and Sport.).
- Management committee substitute member of European Cooperation in Science & Technology (COST) Action IC1404: [Multi-Paradigm Modelling for Cyber-Physical Systems \(MPM4CPS\)](#)
- Invited speaker at the panel “The Academy’s Approach to Software Architecture and the Use of Software Architecture in the Industry”, held in 7th Turkish Software

Architecture Conference (UYMK 2018), November 30, 2018, Istanbul, Turkey.

- Chapter reviewer for the book: "[Formal and Practical Aspects of Domain-Specific Languages: Recent Developments](#)", edited by Marjan Mernik, published by IGI Global (2013)

- Reviewer for the following journals:
 - [Acta Electrotechnica et Informatica](#)
 - [Applied Computing and Informatics](#)
 - [Applied Soft Computing](#)
 - [Computers & Industrial Engineering](#)
 - [Computer Languages, Systems & Structures](#)
 - [Computer Science and Information Systems](#)
 - [Computer Standards & Interfaces](#)
 - [Computer Systems Science & Engineering](#)
 - [DUMF Journal of Engineering](#)
 - [Engineering Applications of Artificial Intelligence](#)
 - [IEEE Access](#)
 - [IEEE Transactions on Knowledge and Data Engineering](#)
 - [IET Software](#)
 - [International Journal of Agent-Oriented Software Engineering](#)
 - [International Journal of Informatics Technologies](#)
 - [International Journal of Software Engineering and Knowledge Engineering](#)
 - [Journal of Experimental & Theoretical Artificial Intelligence](#)
 - [Journal of Software: Evolution and Process](#)
 - [Journal of Visual Languages and Computing](#)
 - [Science of Computer Programming](#)
 - [Software Quality Journal](#)
 - [Turkish Journal of Electrical Engineering & Computer Sciences](#)

- Organizing committee memberships:
 - Doctoral and Master of Science Mentoring Program at 9th Turkish National Software Engineering Symposium (UYMS 2015), September 9-11, 2015, Izmir, Turkey
 - 15th Turkish Symposium on Artificial Intelligence and Neural Networks (TAINN 2006), June 21-24, 2006, Akyaka, Mugla, Turkey

- Program committee memberships:
 - ACM SIGAPP Symposium on Applied Computing, Technical Track on Programming Languages: ACM SAC PL 2013, 2014, 2015, 2016, 2017, 2018, 2019
 - International Workshop on Human Factors in Modeling, held in conjunction with the ACM/IEEE International Conference on Model Driven Engineering Languages and Systems: ACM/IEEE MODELS HuFaMo 2015, 2016
 - International Workshop on Sensor Security, held in conjunction with International Conference on Availability, Reliability and Security: ARES IWSS 2009
 - International Conference on Distributed Computing and Artificial Intelligence, Special Session on Social Modelling of Ambient Intelligence in Large Facilities: DCAI SMAILF 2018

- International Workshop on DSL Architecting and DSL-based Architectures, held in conjunction with the 8th European Conference on Software Architecture: ECSA DADA 2014
 - Workshop on Model Driven Approaches in System Development, held in conjunction with Federated Conference on Computer Science and Information Systems: FedCSIS MDASD 2012, 2014, 2016, 2018
 - Workshop on Advances in Programming Languages, held in conjunction with Federated Conference on Computer Science and Information Systems: FedCSIS WAPL 2013, 2015, 2017
 - International Conference on Agents and Artificial Intelligence: ICAART 2013, 2014, 2015, 2016, 2017, 2018, 2019
 - International Conference on the Quality of Information and Communications Technology, Thematic Track on Quality Aspects in Model Driven Engineering: QUATIC QMDE 2014, 2016, 2018
 - Symposium on Languages, Applications and Technologies, Track on Human-Computer Languages: SLATE 2016, 2017
 - Turkish Workshop on Model-Driven Software Development: TMODELS 2010
 - Turkish Software Architecture Conference: UYMK 2010, 2012, 2014, 2016, 2018
 - Turkish National Software Engineering Symposium: UYMS 2009, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018
- Administrative duties:
 - Vice Director of Ege University International Computer Institute (*since January 2017*)
 - Member of Ege University International Computer Institute Directorate Board (*since September 2009*)
 - Member of Ege University International Computer Institute Academic Assessment and Quality Improvement Committee (*since December 2009*)
 - Member of Ege University International Computer Institute Academic Encouragement Application Pre-Assessment Committee (*since January 2016*)
 - Member of Ege University International Computer Institute Scientific Research Projects Committee (*since September 2017*)
 - Member of Association for Computing Machinery (ACM)
 - Panelist in the evaluation meetings of the research project proposals submitted to TUBITAK ARDEB-EEEAG
 - External consultant for the research project proposals submitted to TUBITAK ARDEB-EEEAG
 - Referee for the assessment of the industrial research & development (R&D) project proposals submitted to TUBITAK TEYDEB
 - Inspector for the industrial R&D projects supported by TUBITAK TEYDEB
 - Referee for the assessment of the entrepreneurs' business ideas submitted to TUBITAK TEYDEB
 - Concept advisor for Science Center Support Programme of TUBITAK Science and Society Department (BTDB)
 - External consultant for the undergraduate national/international research project

proposals submitted to TUBITAK Science Fellowships and Grant Programmes Department (BIDEB)

- External consultant for the industry-focused undergraduate research project proposals submitted to TUBITAK BIDEB
- Panelist in the evaluation meeting of the research scholarship applications submitted for the International Research Fellowship Programme of TUBITAK BIDEB
- Field committee member for the Technology Development Foundation of Turkey (TTGV)
- Committee member for the assessment of R&D center applications submitted to the Republic of Turkey - Ministry of Industry and Technology
- Committee member for the inspection of the R&D centers supported by the Republic of Turkey - Ministry of Industry and Technology
- Referee for the assessment of R&D center applications submitted to the Republic of Turkey - Ministry of Industry and Technology
- Inspector for the R&D centers supported by the Republic of Turkey - Ministry of Industry and Technology
- Committee member for the assessment of applications submitted to the Techno-entrepreneur Programme of the Republic of Turkey - Ministry of Industry and Technology
- Referee for the assessment of the projects funded by the Scientific Research Projects Directorate of Ege University
- Jury member for the assessment of faculty member applications
- Jury member for the assessment of the projects submitted to 2018 R&D and Innovation Project Contest organized by Antalya Organized Industrial Zone
- Jury member for the assessment of the computer science undergraduate students' projects submitted to the series of Young Brains New Ideas Project Contest
- Jury member for the assessment of the projects submitted to the 2012 Inter-High School Science and Engineering Project Contest organized by Izmir University of Economics and Republic of Turkey – Ministry of National Education

WORK EXPERIENCE

Associate Professor

since March 2016 Ege University International Computer Institute, Izmir, TURKEY

- Courses taught: “Multi-agent Systems”, “Object-oriented Programming”, “Data Structures and Algorithms” and “Programming Languages”

Consultant (Part-time)

since May 2018 KocSistem Information Communication Services Inc., Istanbul, TURKEY

- Participated mainly in the EU EUREKA ITEA labelled and TUBITAK TEYDEB funded R&D project: “ASSUME: Affordable Safe & Secure Mobility Evolution”

Consultant (Part-time)

since June 2018 HERMES Communications Co., Izmir, TURKEY

- Participated mainly in the R&D project: "Development of a SaaS Platform for Rule-based and Automatic Management of Business Processes"

Consultant (Part-time)

since November 2018 Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co., Izmir, TURKEY

- Participated mainly in EU EUREKA EURIPIDES labelled and TUBITAK TEYDEB funded R&D project: "SMARTBUS: Smart Integrated Solution for Public Transportation Bus Fleets"

Consultant (Part-time)

May 2018 – November 2018 Four Mobile Information Technologies Co., Izmir, TURKEY

- Participated mainly in the R&D project: "Scalable and Robust Rule Engine"

Consultant (Part-time)

November 2017 – April 2018 Univera Computer Systems Co., Izmir, TURKEY

- Participated mainly in the R&D project: "Development of a Metamodel for Dexmo Software Platform"

Consultant (Part-time)

May 2015 – December 2017 KocSistem Information Communication Services Inc., Istanbul, TURKEY

- Participated mainly in the EU EUREKA ITEA labelled and TUBITAK TEYDEB funded R&D project: "ModelWriter: Text & Model-Synchronized Document Engineering Platform"

Consultant (Part-time)

December 2012 – December 2014 Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co., Izmir, TURKEY

- Participated mainly in the TUBITAK TEYDEB funded R&D project: "Development of a CANBus-based Ecodriving System for Public Transport Bus Services"

Consultant (Part-time)

November 2012 – December 2013 Unit Information Technologies Research, Development and Automation Systems Co., Izmir, TURKEY

- Participated mainly in the TUBITAK TEYDEB funded R&D project: "Model Driven Development of Composite Content Applications"

Assistant Professor

June 2009 – February 2016 Ege University International Computer Institute, Izmir, TURKEY

- Courses taught: "Multi-agent Systems", "Service-oriented Computing", "Object-oriented Programming", "Data Structures and Algorithms" and "Programming Languages"

Research Assistant

June 2004 – June 2009 Ege University International Computer Institute, Izmir, TURKEY

- Assisted courses: "Object Oriented Programming", "Advanced Programming with Java", "Information Systems", "Parallel Programming", "Distributed Systems" and "Advanced Computer Architecture"

Research Assistant

December 2001 – August 2003 Ege University International Computer Institute, Izmir, TURKEY

- Assisted courses: “Operating Systems”, “Data Structures” and “Information Systems”

Software Developer (Part-time)

November 2000 – March 2001 Tema Computer Inc., Izmir, TURKEY

- Participated mainly in design and implementation of commercial web sites

EDUCATION

September 2003 – July 2008 Ph.D. in Information Technologies, Ege University Graduate School of Natural and Applied Sciences, Izmir, TURKEY

- GPA: 93.86 / 100
- *Graduate Dissertation:* Model Driven Development of Semantic Web Enabled Multi-agent Systems
 - Introducing a new reference software architecture for Semantic Web enabled Multi-agent Systems (MASs)
 - Definition of a platform independent MAS metamodel in which agent and semantic web service interactions are especially considered
 - Introducing a model driven agent software development process in which both model to model (M2M) and model to text (M2T) transformation steps are included
 - Evaluation of the proposed M2M and M2T transformations by considering development of real MAS applications for two different MAS software frameworks
 - Thesis (written in Turkish) can be found at: <http://ube.ege.edu.tr/~kardas/resources/DoktoraTezi.pdf>

September 2001 – August 2003 M.Sc. in Information Technologies, Ege University Graduate School of Natural and Applied Sciences, Izmir, TURKEY

- GPA: 88.13 / 100
- *Graduate Thesis:* Use of Smart Cards in Health Records
 - Design and implementation of a healthcare information system architecture based on smart card technology
 - Design and implementation of a distributed object protocol in which smart cards participate in data transmission, data security and system authentication tasks
 - Use of JavaCard and Java RMI technologies in implementation
 - More information can be available at: <http://ube.ege.edu.tr/~kardas/master>

September 1997 – August 2001 B.Sc. in Computer Engineering, Ege University Computer Engineering Department, Izmir, TURKEY

- GPA: 80.95 / 100
- *Graduate Thesis :* A Web Based Hotel Reservation System
 - Development of an n-tier client / server application using Model-View-Controller architectural pattern
 - E-business application approach and object oriented system analysis and design
 - System implementation by using Java Servlet, JSP, Java Bean, Java Mail technologies, concurrent multi-thread architecture and Oracle database

September 1994 – February 1997 High School, Bornova Anatolian High School, Izmir, TURKEY

- GPA: 4.55 / 5
- *Education Language:* English *Branch In High School:* Science

**AWARDS,
GRANTS and
SCHOLASTIC
ACHIEVEMENTS**

(2015) The rank of Associate Professor in Computer-Information Science and Engineering field, achieved from the Republic of Turkey - Inter-University Council (ÜAK)

Awards:

- (2018) "Best Paper Award" in the Software Modeling Track of the 12th Turkish National Software Engineering Symposium (UYMS 2018)
- (2018) TUBITAK Project Performance Award
- (2017) TUBITAK Project Performance Award
- (2017) TUBITAK Turkish Academic Network and Information Centre (ULAKBIM) International Scientific Publication Promotion (for 2 publications)
- (2016) "Excellence Award", awarded by Elsevier Science Publisher B.V.'s Computer Languages, Systems & Structures journal in recognition of the significant contributions made to the quality of the journal
- (2016) Ege University Science and Technology Center (EBILTEM) Project Application Award
- (2015) TUBITAK ULAKBIM International Scientific Publication Promotion
- (2015) EBILTEM Publication Award
- (2014) TUBITAK ULAKBIM International Scientific Publication Promotion (for 4 publications)
- (2014) EBILTEM Publication Award (for 4 publications)
- (2009) TUBITAK ULAKBIM International Scientific Publication Promotion
- (2008) EBILTEM Publication Award
- (2007) TUBITAK ULAKBIM International Scientific Publication Promotion (for 3 publications)
- (2007) EBILTEM Publication Award (for 4 publications)
- (2006) TUBITAK International Scientific Publication Promotion
- (2006) EBILTEM Publication Award (for 6 publications)

Grants:

- For project / research grants, please refer to [professional activities](#) section.
- (2007) EBILTEM Grant for participating in Fifth German conference on Multi-Agent System Technologies (MATES 2007) Leipzig, Germany
- (2007) TUBITAK BIDEB Grant for participating in Fifth German conference on Multi-Agent System Technologies (MATES 2007) Leipzig, Germany
- (2006) TUBITAK BIDEB Grant for participating in Net.ObjectDays 2006, Erfurt, Germany

Scholarship:

- (2006) TUBITAK BIDEB Ph.D. Scholarship (for 4 years)

Other Achievements:

- Co-authored article, called "A model driven architecture for the development of smart card software", was ranked 2nd on Elsevier Science Publisher B.V.'s ScienceDirect Top 25 List of Most Downloaded Articles for "Computer Languages, Systems & Structures" journal during the entire year 2014.
- Co-authored article, called "Design and implementation of a smart card based healthcare information system", was ranked 2nd on Elsevier Science Publisher B.V.'s ScienceDirect Top 25 List of Most Downloaded Articles for "Computer Methods and Programs in Biomedicine" journal between January to March 2006.

STUDENTS

Graduated Ph.D. Students:

- Moharram Challenger, Ph.D., 2016
Dissertation Title: A Domain-specific Modeling Language for Semantic Web enabled Multi-agent Systems
Position after graduation: Postdoc researcher at Information Technology Group, Wageningen University, the Netherlands
R&D Director of Unit Information Technologies Research, Development and Automation Systems Co., Turkey

Graduated M.Sc. Students:

- Berkay Akdal, M.Sc., 2018
Thesis Title: A Domain-specific Language for the Model-driven Analytics of Logistics Data
Position after graduation: Software Developer at Galaksiya Information Technologies Co., Turkey
- Sadik Arslan, M.Sc., 2018
Thesis Title: Model-driven Development of Device Tree Software
Position after graduation: Electronic Engineer at Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co., Turkey
- Emine Bircan, M.Sc., 2017
Thesis Title: Horizontal Transformations between Platform Independent Metamodels of Software Agents
Position after graduation: Computer Engineer at TUBITAK National Research Institute of Electronics and Cryptology (UEKAE), Turkey
- Miray Tosun, M.Sc., 2015
Thesis Title: A Methodology for the Automatic Generation of JavaCard Software
Position after graduation: Software Engineer at R&D Center of OBASE Computer and Consultancy Co., Turkey
- Kemal Deniz Teket, M.Sc., 2013
Thesis Title: Agent-based Parent Selection in Peer-to-Peer Mesh-based Video Streaming Systems
Position after graduation: Ph.D. Student at Laboratoire d'InfoRmatique en Image et Systèmes d'information (LIRIS), Institut national des sciences Appliquées de Lyon (INSA Lyon), France
- Orcun Yildirim, M.Sc., 2012
Thesis Title: A Mobile Agent-based Decision Support System for Cement Industry
Position after graduation: Industrial Engineer at Cimentas Group, Turkey
- Sinem Getir, M.Sc., 2012
Thesis Title: Semantics of a Domain-specific Modeling Language for Semantic Web enabled Multi-agent Systems
Position after graduation: Ph.D. Student at Institute of Software Technology, Universität Stuttgart, Germany
- Suleyman Yildirim, M.Sc., 2012
Thesis Title: An Agent Architecture for Peer-to-Peer Live Video Streaming Applications
Position after graduation: Post-M.Sc. Software Designer Trainee at 3TU.School for Technological Design, Stan Ackermans Institute, Eindhoven University of Technology, the Netherlands

- Sebla Demirkol, M.Sc., 2012
Thesis Title: Syntax of a Domain-specific Modeling Language for Semantic Web enabled Multi-agent Systems
Position after graduation: Software Developer at Veripark Co., Turkey
- Hidayet Burak Saritas, M.Sc., 2011
Thesis Title: Model-based Engineering for the Development of Smart Card Software
Position after graduation: Software Developer at Kentkart Ege Electronics Automatic Fare Collection & Vehicle Tracking Systems Co., Turkey
- Ferhat Erata, M.Sc., 2010
Thesis Title: A Platform-specific Metamodel for Developing Web-based Systems
Position after graduation: Co-founder and president of Unit Information Technologies Research, Development and Automation Systems Co., Turkey

Graduated M.Sc. Non-Thesis Students:

- Gokmen Balkan, M.Sc., 2018
Graduation Project Title: Applying Design Patterns to Procedural Generation of Levels in Role Playing Games
Position after graduation: Software Developer at Univera Co. R&D Center, Turkey
- Hamit Unugur, M.Sc., 2014
Graduation Project Title: Assessment of the Semantic Service Discovery Methods on Mobile Platforms
Position after graduation: Software Developer at MAN Turkey Co., Turkey
- Ozge Ozkaya, M.Sc., 2013
Graduation Project Title: A Study on the RESTful Web Services
Position after graduation: Responsible of Ege University International Computer Institute's PC Laboratory, Turkey
- Dincer Can, M.Sc., 2013
Graduation Project Title: A Software that Records and Displays Optical Disc Contents
Position after graduation: Information Technology Teacher at Republic of Turkey - Ministry of National Education, Turkey

PERSONAL INFORMATION

Nationality: Republic of Turkey
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