



DEPARTMENT OF COMPUTER ENGINEERING Graduate Programs Thesis Subjects and Advisor Information for the Prospective Students to be admitted in the Spring Semester of 2021-2022

Name-surname, title	Number of Current Advisorship in MSc Degree (with thesis)	Number of Current Advisorship in MSc Degree (without thesis)	Number of Current Advisorship in PhD Degree	Number of Completed MSc Thesis	Number of Completed PhD Thesis	Total SCI-Exp, SSCI, A&HCI Publications	SCI-Exp, SSCI, A&HCI Publications In the last 5 years	Number of Graduate Courses
Mehmet Cudi Okur, Prof. (PhD)	-	-	-	14	6	12	3	6
Research Fields	Database systems, data structures, business intelligence, data mining, statistical computing							
MSc Degree Subject Proposal 1	Query execution performance of columnar (Column oriented) databases							
MSc Degree Subject Proposal 2	Evaluation of non-linear dimensionality reduction methods							

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Mehmet S. Ünlütürk, Prof. (PhD)	3	-	5	4	0	23	11	1
Research Fields	Software development, embedded systems, hospital information systems, software engineering							
MSc Degree Subject Proposal 1	Dynamic Data Race Detection							
MSc Degree Subject Proposal 2	Neural Networks for Biomedical Applications							
PhD Subject Proposal 1	Computer Vision with Deep Learning							
PhD Subject Proposal 2	Real-Time Mobile Health Monitoring System							
Ongoing Projects Supervised or Ongoing projects involved in as a researcher And scholar opportunities	<ul style="list-style-type: none">1505 University-Industry Cooperation Grant Program: “Hazır Giyim Sektöründe Model Beğenisinin Yapay Zekâ Kullanılarak Öngörülmesi” Coordinator (2018-2020), PhD Student, Caner K. Hekimoğlu, Master’s student, Aybüke KeçeciTÜBİTAK 1601 “Katip-Çelebi-Newton Grant Industry-Academy Partnership” (Project No: 4180046) (Researcher, 2019)2508 TÜBİTAK - ARSS SLOVENYA Bilateral Cooperation 2017 Call: (Project No: 118M180), “Akıllı bir Otomatik Araçlı Depolama ve Çekme Sistem Tasarımı”, Researcher, 2018-2021							

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Mehmet Ufuk Çağlayan, Prof. (PhD)	2	-	-	29	8	29	13	0
	MSc/PhD Degree Subject Proposal 1	Formal Specification and Verification of Security and Trust						
	MSc/PhD Degree Subject Proposal 2	Design with Security in Computer and Software Systems						

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Ahmet Koltuksuz, Assoc. Prof. (PhD)	2	0	1	29	5	1	1	2
	MSc Degree Subject Proposal 1	Secure and Efficient Matching of Biometric Signatures with Convolutional Neural Network Algorithms of Artificial Intelligence						
	MSc Degree Subject Proposal 2	Improved Security of Biometric Signature with Block Chain						
	PhD Subject Proposal 1	3D Relativity Simulator with Augmented Reality						
	Ongoing Projects Supervised or Ongoing projects involved in as a researcher And scholar opportunities	<ul style="list-style-type: none"> 1 Scientific research Project is in preparation The prototype that will emerge in the summer of 2020 as a result of the BAP project, will be fully equipped and worked on for commercialization being transformed into a Master's study in the 2020-2010 Fall semester. At this stage, the above-defined Master's subjects will be included in the project studies, and financial support will be provided." 1 Tübitak 1005 project is in preparation. (2 PhD or 2 master's students will be employed.) 						

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Murat Komesli, Assoc. Prof. (PhD)	0	0	0	4	1	15	3	8
	MSc Degree Subject Proposal 1	<i>Konum tabanlı sosyal ağlardan mekan-zamansal (Geo-temporal) veri bütünleştirilmesi uygulaması geliştirimi</i>						
	MSc Degree Subject Proposal 2	<i>Coğrafi Bilgi Sistemleri üzerinde Yapay Sinir Ağları kullanarak orman yangın yerlerinin belirlenmesi</i>						

PhD Subject Proposal 1	<i>Nesnelerin İnterneti üzerinde anlamsal birlikte çalışılabilirliğin gerçekleştirimi</i>
PhD Subject Proposal 2	<i>“Kapalı mekan (AVM, hastane, müze,vb.) konumlandırma sistemi geliştirilmesi”: Açık havada GPS sinyalleri ile yapılan konumlandırma, kapalı mekanlarda çalışmadığından, farklı teknolojiler (RFID, i-beacon, vb) kullanılarak konumlandırma yapılacaktır.</i>

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Tuncay Ercan, Assoc.Prof. (PhD)	1	0	3	7	2	22	5	2
Research Fields	Advanced network technologies, wireless Ad-hoc and sensor networks, network security, network modeling and design, educational technology							
MSc Degree Subject Proposal 1	Usage of Internet of Things in Manufacturing OR Supply Chain Management							
MSc Degree Subject Proposal 2	Information Processing and Collaboration in P2P networks							
PhD Subject Proposal 1	Combination of Software Defined networking and Named Data Network							
PhD Subject Proposal 2	Development of an open-source, discrete-event based network simulator							
Ongoing Projects Supervised or Ongoing projects involved in as a researcher And scholar opportunities	<ul style="list-style-type: none"> •TÜBİTAK 1001_(New Application)_Researcher: “Endüstriyel IoT için Entegre Akıllı Kontrol Birimi Tasarımı ve Gerçeklemesi” 							

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Dindar Öz, Assist. Prof. (PhD)	0	0	0	0	0	6	3	6
Research Fields	Discrete optimizations, metaheuristic algorithms							
MSc Degree Subject Proposal 1	Multiobjective Task Allocation Problem							
MSc Degree Subject Proposal 2	Multiobjective Wireless Sensor Network Deployment Problem							
PhD Subject Proposal 1	Hybridization of the state of the art metaheuristic optimization algorithms							
PhD Subject Proposal 2	Path planing under domain related special constraints							

Ongoing Projects Supervised or Ongoing projects involved in as a researcher And scholar opportunities	Scientific Research Project 071: “Çok amaçlı görev dağıtım problemi için evrimsel algoritmaların paralelleştirilmesi” (1 undergraduate student is employed as a part time project assistant)
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Hüseyin Hışıl, Assist. Prof. (PhD)	4	0	0	5	0	5	3	6
MSc Degree Subject Proposal 1	Efficient Implementation of Post-quantum Cryptography							
MSc Degree Subject Proposal 2	Multi-Key Encryption Techniques							
PhD Subject Proposal 1	Isogeny Based Cryptography							
Ongoing Projects Supervised or Ongoing projects involved in as a researcher And scholar opportunities	<p>TÜBİTAK-3001 (No: 117E558): “Çok Basamaklı Tamsayılar İçin Hızlandırılmış Modüler Ters Alma Algoritması”. (1 master’s student is employed in the project as a scholar).</p> <p>BAP-57, “Yeni Intel İşlemci Komutu MULX’in Kriptografik Uygulamalarda Kullanımı” (2 undergraduate students received scholarships. The project is in the closing phase.)</p>							

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Korhan Karabulut, Assist. Prof. (PhD)	2	0	4	6	3	10	3	2
Research Fields	Discrete optimization, artificial intelligence							
MSc Degree Subject Proposal 1	Evolutionary Neural Networks for Time Series Forecasting							
MSc Degree Subject Proposal 2	Multiobjective Feature Selection							
PhD Subject Proposal 1	Evolutionary Algorithms for Reinforcement Learning							
PhD Subject Proposal 2	Evolving Deep Neural Networks							

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Mutlu Beyazıt, Assist. Prof. (PhD)	4	-	-	-	-	7	3	2
	Research Fields	Model-based testing, computer security						
	MSc Degree Subject Proposal 1	Effects of Test Set Optimization/Redundancy on Testing Costs						
	MSc Degree Subject Proposal 2	Test Generation from Partial Models						
	PhD Subject Proposal 1	Test Prioritization Strategies						
	PhD Subject Proposal 2	Investigation of Test Set Characteristics						
	Ongoing Projects Supervised or Ongoing projects involved in as a researcher And scholar opportunities	“Çevik Yazılım Ürün Hatları için Olay Sıra Çizge Tabanlı Test Üretim Yöntemi Geliştirilmesi” (TÜBİTAK Project - ARDEB 1001), Researcher. (1 Master’s student is employed in the project as a scholar.)						

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Umut Avcı, Assist. Prof. (PhD)	1	-	-	2	-	2	2	0
	Research Fields	Machine learning, pattern recognition, information retrieval						
	MSc Degree Subject Proposal 1	Feature engineering for emotion recognition from speech						
	MSc Degree Subject Proposal 2	Modeling team dynamics during multiparty collaboration						
PhD Subject Proposal 1	Improving human-computer interaction with virtual agents							

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Uras Tos, Assist.	0	0	0	0	0	2	2	0
	Research Fields	Cloud computing, large-scale data management systems, data replication, data science						

Prof. (PhD)	MSc Degree Subject Proposal 1	Comparison of data replication strategies in large-scale data management systems
	MSc Degree Subject Proposal 2	Data access pattern prediction for replicating data in data grid systems