

## Asst. Prof. ÖZDEN ÖZCAN TOP

### Personal Information

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### International Researcher IDs

ScholarID: vJysSgUAAAAJ

ORCID: 0000-0001-6608-0726

Publons / Web Of Science ResearcherID: AAB-3520-2020

ScopusID: 24481760200

Yoksis Researcher ID: 163469

### Education Information

Doctorate, Middle East Technical University, Graduate School of Informatics, Information Systems, Turkey 2008 - 2014

Postgraduate, Middle East Technical University, Graduate School of Informatics, Information Systems, Turkey 2005 - 2008

Undergraduate, Yildiz Technical University, Faculty Of Mechanical Engineering, Department Of Industry Engineering, Turkey 2000 - 2005

### Foreign Languages

English, C2 Mastery

### Dissertations

Doctorate, Agilitymod: A software agility reference model for agility assessment, Middle East Technical University, Graduate School of Informatics, Information Systems, 2014

Postgraduate, Functional similarity impact on the relation between functional size and software development effort, Middle East Technical University, Graduate School of Informatics, Information Systems, 2008

### Research Areas

Quality and Production Management, Software Management, Software Engineering

### Academic Titles / Tasks

Assistant Professor, Middle East Technical University, Graduate School of Informatics, Information Systems, 2020 - Continues

## Academic and Administrative Experience

Erasmus Program Department Coordinator, Middle East Technical University, Graduate School of Informatics, Information Systems, 2022 - Continues

Erasmus Program Department Coordinator, Middle East Technical University, Graduate School of Informatics, Data Informatics, 2022 - Continues

## Courses

Agile Software Development, Postgraduate, 2021 - 2022, 2020 - 2021

Data Base Concepts and Applications, Postgraduate, 2022 - 2023, 2021 - 2022, 2020 - 2021

Graduate Seminar, Postgraduate, 2022 - 2023, 2020 - 2021

Software Project Management, Doctorate, 2022 - 2023, 2021 - 2022

Software Quality Management, Postgraduate, 2021 - 2022, 2020 - 2021

Software Metrics, Postgraduate, 2019 - 2020

Software Process Improvement, Postgraduate, 2020 - 2021

Software Management Primer I, Postgraduate, 2020 - 2021

## Advising Theses

Özcan Top Ö., Alkış Bayhan N., UNDERSTANDING BARRIERS EXPERIENCED BY WOMENIN TÜRKİYE'S IT SECTOR, Postgraduate, Z.GÜRAKIN(Student), 2024

Özcan Top Ö., Betin Can A., A generic blockchain process reference model for software development in safety critical domains, Doctorate, M.VİLDAN(Student), 2024

Özkan Yıldırım S., Özcan Top Ö., ACCEPTANCE OF SOFTWARE PROCESS IMPROVEMENT MODELS IN SMALL AND MEDIUM SIZED ENTERPRISES: EMPIRICAL FINDINGS OF IT SECTOR IN TURKEY, Doctorate, S.DURMUŞ(Student), 2023

Özcan Top Ö., UNDERSTANDING TECHNICAL DEBT IN COMPLEX SYSTEMDEVELOPMENT PROJECTS: A VISUALIZATION MODEL, Postgraduate, M.CAN(Student), 2023

Özcan Top Ö., Impact of Scrum Tailoring Chocies on Technical Debt, Postgraduate, Ö.ÖZKAN(Student), 2023

Özcan Top Ö., Koçyiğit A., TECHNICAL DEBT SPECIFICATION AND CATEGORIZATION FOR SOFTWARE AS A SERVICE APPLICATIONS, Postgraduate, Y.KURANEL(Student), 2022

DEMİRÖRS O., ÖZCAN TOP Ö., Assess agility : agility assessment approach supported with an automated web based agility assessment tool, Postgraduate, O.Ege(Student), 2017

## Advising Graduates (Non-Thesis)

Özcan Top Ö., Analysis of Migration from Monolithic to Microservice Architecture: A Case Study, Masters (Non-Thesis,Evening Education), Ö.Şen(Student), 2022

Özcan Top Ö., Suggesting Tool Solutions to Challenges of Distributed Development for VSEs: Mapping the Tools With ISO 29110 Basic Profile Processes, Masters (Non-Thesis,Evening Education), S.Berfu(Student), 2022

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. Advancing Technical Debt Management in Software Systems with a Comprehensive TD Indicator and Question Catalog**  
Çağlayan D., Özcan Top Ö.  
APPLIED COMPUTING REVIEW, vol.24, no.2, pp.30-54, 2024 (SCI-Expanded)
- II. The Crucial Role of Personal Values on Well-Being and Resilience in the Software Industry**  
Yurum O. R., Özcan Top Ö.

IEEE SOFTWARE, vol.41, no.4, pp.115-123, 2024 (SCI-Expanded)

- III. **How Software Practitioners Perceive Work-Related Barriers and Benefits Based on their Educational Background: Insights from a Survey Study**  
Unlu H., Yurum O. R., ÖZCAN TOP Ö., Demirors O.  
IEEE Software, vol.40, no.5, pp.66-75, 2023 (SCI-Expanded)
- IV. **Blockchain technology applications in the health domain: a multivocal literature review**  
Baysal M. V., Özcan Top Ö., Betin Can A.  
Journal of Supercomputing, vol.79, no.3, pp.3112-3156, 2023 (SCI-Expanded)
- V. **What Makes Agile Software Development Agile?**  
Kuhrmann M., Tell P., Hebig R., Kluender J., Muench J., Linssen O., Pfahl D., Felderer M., Prause C. R., Macdonell S. G., et al.  
IEEE TRANSACTIONS ON SOFTWARE ENGINEERING, vol.48, no.9, pp.3523-3539, 2022 (SCI-Expanded)
- VI. **To what extent the medical device software regulations can be achieved with agile software development methods? XP-DSDM-Scrum**  
Ozcan-Top Ö., McCaffery F.  
JOURNAL OF SUPERCOMPUTING, vol.75, no.8, pp.5227-5260, 2019 (SCI-Expanded)
- VII. **Application of a software agility assessment model - AgilityMod in the field**  
Ozcan-Top Ö., Demirors O.  
COMPUTER STANDARDS & INTERFACES, vol.62, pp.1-16, 2019 (SCI-Expanded)
- VIII. **A hybrid assessment approach for medical device software development companies**  
Ozcan-Top Ö., McCaffery F.  
JOURNAL OF SOFTWARE-EVOLUTION AND PROCESS, vol.30, no.7, 2018 (SCI-Expanded)

## Articles Published in Other Journals

- I. **Categorization of Technical Debt in Software as a Service Applications**  
ÖZCAN TOP Ö., KURANEL Y., KOÇYİĞİT A.  
Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi, vol.39, no.3, pp.446-462, 2023 (Peer-Reviewed Journal)
- II. **Analysis of Software Process Improvement Activities in SMEs: A Systematic Literature Review**  
Durmuş S., Özcan Top Ö., Özkan Yıldırım S.  
Bilişim Teknolojileri Dergisi, vol.14, no.4, pp.411-423, 2021 (Peer-Reviewed Journal)
- III. **Towards Development of a Model for Acceptance of Software Process Improvement Models in SMEs: Preliminary Findings**  
Durmuş S., Özkan Yıldırım S., Özcan Top Ö.  
Journal of Information Systems and Management Research, vol.3, no.1, pp.51-60, 2021 (Peer-Reviewed Journal)
- IV. **Assessing Software Processes over a New Generic Software Process Assessment Tool**  
YÜRÜM O. R., ÖZCAN TOP Ö., DEMİRÖRS O.  
Warsaw School of Economics, Collegium of Economic Analysis, vol.43, pp.1-30, 2017 (Peer-Reviewed Journal)

## Books & Book Chapters

- I. **Improving Medical Supply Chain Disruption Management with the Blockchain Technology**  
Özcan Top Ö.  
in: Supply Chain Risk and Disruption Management. Flexible Systems Management, Paul, Sanjoy Kumar; Agarwal, Renu; Sarker, Ruhul Amin; Rahman, Towfique, Editor, Springer Nature, Singapore, pp.217-230, 2023
- II. **Awareness and Utilization of Emerging Technologies in E-Businesses: A Survey From Turkey**  
ALKIŞ N., ÖZCAN TOP Ö.  
in: Driving Transformative Change in E-Business Through Applied Intelligence and Emerging Technologies, Taherdoost, Hamed, Editor, IGI GLOBAL, pp.25-57, 2022

## Refereed Congress / Symposium Publications in Proceedings

- I. **Critical Success Factors in Data Analytics Projects: Insights from a Systematic Literature Review**  
Demir N., Aysolmaz B., Özcan Top Ö.  
The 23rd IFIP Conference e-Business, e-Services, and e-Society I3E2024, Haarlem, Netherlands, 12 - 13 September 2024, pp.129-141
- II. **Revisiting Technical Debt Types and Indicators for Software Systems**  
Caglayan D., Özcan Top Ö.  
39th Annual ACM Symposium on Applied Computing (SAC), Avila, Spain, 8 - 12 April 2024, pp.834-841
- III. **Exploring Coexistence of Software Architecture Development and Agility through a Multivocal Literature Review**  
Kırtıloğlu G., Özcan Top Ö.  
2023 9th International Conference on Control, Decision and Information Technologies (CoDIT), Rome, Italy, 3 - 06 July 2023, pp.2304-2309
- IV. **Software Metrics: A Systematic Review of Problems and Associated Solutions**  
Çetin D., ÖZCAN TOP Ö.  
16. Ulusal Yazılım Mühendisliği Sempozyumu, Erzurum, Turkey, 27 February 2023, pp.261-271
- V. **Teaching Agile in an Agile Way: A Case from the First Iteration in a University**  
Özkan N., Özcan Top Ö., Bal Ş., Gök M. Ş.  
3rd International Informatics and Software Engineering Conference (IISEC), Ankara, Turkey, 15 - 16 December 2022, pp.1-6
- VI. **Tailoring Choices Made in Scrum Projects: A Systematic Literature Review**  
Özkan Ö., Özcan Top Ö.  
The Joint Conference of the 31st International Workshop on Software Measurement and the 16th International Conference on Software Process and Product Measurement 2022, İzmir, Turkey, 28 - 30 September 2022, vol.3272, pp.1-13
- VII. **Challenges and Working Solutions in Agile Adaptation: Experiences from the Industry**  
Özcan Top Ö., Demirörs O., Mccaffery F.  
International Workshop on Software Measurement and the International Conference on Software Process and Product Measurement, 29 - 30 October 2020, vol.2725, pp.1-15
- VIII. **Implications of Blockchain Technology in the Health Domain**  
Baysal M. V., Özcan Top Ö., Betin Can A.  
International Conference on Software Engineering Research and Practice, Nevada, United States Of America, 26 - 28 July 2020, pp.641-656
- IX. **Analyzing Technical Debt of a CRM Application by Categorizing Ambiguous Issue Statements**  
Doğancı Y., Özcan Top Ö., Koçyiğit A.  
International Conference on Software Engineering Research and Practice, Nevada, United States Of America, 26 - 28 July 2020, pp.705-718
- X. **Catching up with Method and Process Practice: An Industry-Informed Baseline for Researchers**  
Kluender J., Hebig R., Tell P., Kuhrmann M., Nakatumba-Nabende J., Heldal R., Krusche S., Fazal-Baqaie M., Felderer M., Genero Bocco M. F., et al.  
IEEE/ACM 41st International Conference on Software Engineering - Software Engineering in Practice (ICSE-SEIP), Montreal, Canada, 25 - 31 May 2019, pp.255-264
- XI. **Agile Usage in Embedded Software Development in Safety Critical Domain a Systematic Review**  
Demissie S., Keenan F., ÖZCAN TOP Ö., McCaffery F.  
Software Process Improvement and Capability Determination. SPICE 2018, 9 - 10 October 2018, vol.918, pp.316-326
- XII. **Adopting Agile in the Sports Domain: A Phased Approach**  
Callan-Crilly J., Moynagh A., ÖZCAN TOP Ö., McCaffery F.  
Software Process Improvement and Capability Determination. SPICE 2018. Communications in Computer and Information Science, Greece, 9 - 10 October 2018, vol.918, pp.275-288

- XIII. **A Process Framework Combining Safety and Security in Practice**  
McCaffery F., ÖZCAN TOP Ö., Treacy C., Paul P., Loane J., Callan-Crilly J., McMahon A.  
Systems, Software and Services Process Improvement. EuroSPI 2018. Communications in Computer and Information Science, 5 - 07 July 2018, vol.896, pp.173-180
- XIV. **How Does Scrum Conform to the Regulatory Requirements Defined in MDevSPICE**  
ÖZCAN TOP Ö., McCaffery F.  
SOFTWARE PROCESS IMPROVEMENT AND CAPABILITY DETERMINATION, SPICE 2017, Palma de Mallorca, 4 - 05 October 2017, vol.770, pp.257-268
- XV. **A Lightweight Software Process Assessment Approach Based on MDevSPICE((R)) for Medical Device Development Domain**  
ÖZCAN TOP Ö., McCaffery F.  
SYSTEMS, SOFTWARE AND SERVICES PROCESS IMPROVEMENT (EUROSPI 2017), Ostrava, Czech Republic, 6 - 08 September 2017, vol.748, pp.578-588
- XVI. **Assessment of Agility in Software Organizations with a Web-Based Agility Assessment Tool**  
Adali O. E., Ozcan-Top Ö., Demirors O.  
43rd Euromicro Conference on Software Engineering and Advanced Applications (SEAA), Vienna, Austria, 30 August - 01 September 2017, pp.88-95
- XVII. **Evaluation of Agility Assessment Tools: A Multiple Case Study**  
Adali O. E., Ozcan-Top Ö., Demirors O.  
16th International Conference on Software Process Improvement and Capability Determination (SPICE), Dublin, Ireland, 9 - 10 June 2016, vol.609, pp.135-149
- XVIII. **A Reference Model for Software Agility Assessment: AgilityMod**  
Ozcan-Top Ö., Demirors O.  
15th International Conference on Software Process Improvement and Capability determination (SPICE), Gothenburg, Sweden, 16 - 17 June 2015, vol.526, pp.145-158
- XIX. **Assessment of agile maturity models: a multiple case study**  
ÖZCAN TOP Ö., DEMİRÖRS O.  
International Conference on Software Process Improvement and Capability Determination, Bremen, Germany, 4 - 06 June 2013, vol.349, pp.130-141
- XX. **Süreç İyileştirme Modellerinin Kamu Kurumlarında Uygulanabilirliği: Bir Durum Çalışması**  
ÖZCAN TOP Ö., Ugan E., Cebeci O., DEMİRÖRS O.  
6. ULUSAL YAZILIM MÜHENDİSLİĞİ SEMPOZYUMU (UYMS), Ankara, Turkey, 30 May - 01 June 2012, pp.101-106
- XXI. **Reliability of COSMIC Functional Size Measurement Results: A Multiple Case Study on Industry Cases**  
Top Ö., Demirors O., Ozkan B.  
35th Euromicro Conference on Software Engineering and Advanced Applications, Patras, Greece, 27 - 29 August 2009, pp.327-334
- XXII. **An Experimental Study on the Reliability of COSMIC Measurement Results**  
Ugan E., Demirors O., Top Ö., Ozkan B.  
19th International Workshop on Software Measurement/3rd International Conference on Software Process and Product Measurement, Amsterdam, Netherlands, 4 - 06 November 2009, vol.5891, pp.321-336
- XXIII. **The Impact of Individual Assumptions on Functional Size Measurement**  
Turetken O., Top Ö., Ozkan B., Demirors O.  
Joint Meeting of the International Workshop on Software Measurement (IWSM)/MetriKon/Mensura 2008, Munich, Germany, 18 - 20 November 2008, vol.5338, pp.155-169
- XXIV. **The effect of entity generalization on software functional sizing B A case study**  
Turetken O., Demirors O., Gencel C., Top Ö., Ozkan B.  
9th International Conference on Product-Focused Software Process Improvement, Frascati, Italy, 23 - 25 June 2008, vol.5089, pp.105-108

## Supported Projects

Çakır M. P., Acartürk C., Özcan Top Ö., Project Supported by Defense Industry, Bilişsel İş yükünün Ölçülerek Uçuş Simülâtör Eğitimlerinin Kişiselleştirilmesi Projesi, 2019 - 2022

## Scientific Refereeing

ACM TRANSACTIONS ON SOFTWARE ENGINEERING AND METHODOLOGY, SCI Journal, September 2024

IEEE SOFTWARE, Journal Indexed in SCI-E, March 2024

ACM TRANSACTIONS ON SOFTWARE ENGINEERING AND METHODOLOGY, Journal Indexed in SCI-E, March 2024

SOFTWARE - PRACTICE AND EXPERIENCE, Journal Indexed in SCI-E, February 2024

EMPIRICAL SOFTWARE ENGINEERING, Journal Indexed in SCI-E, January 2024

IEEE SOFTWARE, Journal Indexed in SCI-E, December 2023

Erciyes Üniversitesi Fen Bilimleri Enstitüsü Dergisi, National Scientific Refreed Journal, September 2023

Technopark, ODTÜ Teknokent Teknoloji Geliştirme Bölgesi, Turkey, August 2023

Technopark, ODTÜ Teknokent Teknoloji Geliştirme Bölgesi, Turkey, June 2023

JOURNAL OF SOFTWARE: EVOLUTION AND PROCESS, Journal Indexed in SCI-E, May 2023

JOURNAL OF SOFTWARE: EVOLUTION AND PROCESS, Journal Indexed in SCI-E, February 2023

The 38th ACM/SIGAPP Symposium On Applied Computing - Lean and Agile Software Development Track, Conference Paper (Full Text), November 2022

Driving Transformative Change in E-Business Through Applied Intelligence and Emerging Technologies, Chapter Scientific / Professional Book Published by Other Publishers, June 2022

BUSINESS & INFORMATION SYSTEMS ENGINEERING, SCI Journal, December 2021

Business & Information Systems Engineering, SCI Journal, April 2021

## Tasks In Event Organizations

Özcan Top Ö., International Workshop on Software Measurement and Conference on Software Measurement Product Measurement, Scientific Congress, Montreal, Canada, Ekim 2024

Özcan Top Ö., International Conference on Software and Systems Processes (ICSSP'24), Scientific Congress, Munich, Germany, Eylül 2024

Özcan Top Ö., 25th International Conference on Agile Software Development, Scientific Congress, Italy, Haziran 2024

Özcan Top Ö., The 10th International Management Information Systems Conference, Scientific Congress, İstanbul, Turkey, Ekim 2023

Özcan Top Ö., The Joint Conference of the 32nd International Workshop on Software Measurement (IWSM) and the 17th International Conference on Software Process and Product Measurement (MENSURA), Scientific Congress, Rome, Italy, Eylül 2023

Özcan Top Ö., The 38th ACM/SIGAPP Symposium On Applied Computing (SAC) - Track on Lean and Agile Software Development, Scientific Congress, Estonia, Mart 2023

Özcan Top Ö., Erdur R. C., 16. Ulusal Yazılım Mühendisliği Sempozyumu, Scientific Congress, Erzurum, Turkey, Mart 2023

Özcan Top Ö., International Conference on Software and Systems Processes (ICSSP'22), Scientific Congress, United States Of America, Mart 2022

Özcan Top Ö., IWSM-MENSURA 2020: The Joint conference of the 30th International Workshop on Software Measurement (IWSM) and the 15th International Conference on Software Process and Product Measurement (MENSURA), Scientific Congress, Mexico City, Mexico, Ekim 2020

Özcan Top Ö., 14. National Software Engineering Symposium, Scientific Congress, İstanbul, Turkey, Ekim 2020

## Metrics

Publication: 38

Citation (WoS): 163

Citation (Scopus): 287

H-Index (WoS): 8

H-Index (Scopus): 11

## **Non Academic Experience**

Dundalk Institute of Technology

FUJITSU TEKNOLOJİ SOLUTIONS BİLİŞİM LTD. STİ