

Assoc. Prof. AYSU BETİN CAN

Personal Information

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Education Information

Doctorate, University Of California, Santa Barbara, Bilgisayar Bilimleri, United States Of America 2001 - 2005
Under Graduate, Middle East Technical University, Faculty of Engineering, Department of Environmental Engineering, Turkey 1996 - 1999

Research Areas

Computer Sciences, Software, Software Engineering, Engineering and Technology

Academic Titles / Tasks

Associate Professor, Middle East Technical University, Graduate School of Informatics, Information Systems, 2014 - Continues
Assistant Professor, Middle East Technical University, Graduate School of Informatics, Information Systems, 2006 - 2014
Research Assistant, University Of California Santa Barbara, Computer Science, 2000 - 2005

Courses

Graduate seminar, Post Graduate, 2017 - 2018, 2018 - 2019, 2019 - 2020
SOFTWARE DESIGN PATTERNS, Post Graduate, 2018 - 2019, 2019 - 2020
INTRODUC.TO SOFTWARE ENG., Post Graduate, 2017 - 2018, 2018 - 2019, 2019 - 2020
SOFTWARE DESIGN PATTERNS, Doctorate, 2017 - 2018, 2018 - 2019, 2019 - 2020
INTRODUCTION TO SOFTWARE TESTING, Post Graduate, 2017 - 2018, 2018 - 2019
INTRODUCTION TO SOFTWARE ENGINEERING, Post Graduate, 2017 - 2018
Introduction to Software Testing, Post Graduate, 2018 - 2019
Software Verification, Doctorate, 2017 - 2018

Advising Theses

BETİN CAN A., APPLICATION OF SUBSPACE CLUSTERING TO SCALABLE MALWARE CLUSTERING, Post Graduate, F.İŞIKTAŞ(Student), 2019
BETİN CAN A., A combinatorial test data generation approach using fault data analysis and discretization of parameter input space, Post Graduate, H.BOSNALI(Student), 2018
BETİN CAN A., An experimental comparison of messaging protocols MQTT and COAP, Post Graduate, H.FARUK(Student), 2017
BETİN CAN A., Improved differential attacks on rectangle, Post Graduate, A.ŞENOL(Student), 2017
BETİN CAN A., Multi-objective regression test-selection in practice: An industrial case study, Post Graduate, R.ÖZKAN(Student), 2017

BETİN CAN A., Haki: A runtime verification tool for javascript MVC web applications, Post Graduate, İ.BİLGE(Student), 2016

BETİN CAN A., A software quality model for android applications, Post Graduate, M.VİLDAN(Student), 2016

BETİN CAN A., A comparative study on automated Android application testing tools, Post Graduate, G.HÖKELEKLİ(Student), 2016

BETİN CAN A., KARAGÖZ P., A new search engine ontology for visually impaired users, Post Graduate, E.AKKAYA(Student), 2015

BETİN CAN A., ELA: An automated statistical fault localization technique, Doctorate, Ö.BAYRAKTAR(Student), 2015

BETİN CAN A., Automated test code generation and execution system for web, Post Graduate, S.FATİH(Student), 2015

BETİN CAN A., An approach for automated verification of web applications using model checking and replaying the scenarios of counter example, Post Graduate, Y.PAÇİN(Student), 2015

BETİN CAN A., Gui testing of android applications: A systematic mapping, Post Graduate, M.AYDIN(Student), 2014

BETİN CAN A., Measuring and assesment of well known bad practices in Android applications, Post Graduate, İ.ALPER(Student), 2014

BETİN CAN A., Web application testing: A systematic literature review, Post Graduate, S.DOĞAN(Student), 2013

BETİN CAN A., Assessing standard-compliance of public institution web sites of Turkey, Post Graduate, S.YALÇINKAYA(Student), 2012

BETİN CAN A., KOÇYİĞİT A., QoS-aware service selection for web service composition, Post Graduate, R.ABDYLDAEVA(Student), 2012

BETİN CAN A., Automatic navigation model extraction for web load testing, Post Graduate, İ.REFİKA(Student), 2011

BETİN CAN A., Finding malformed HTML outputs and unhandled execution errors of ASP.NET applications, Post Graduate, M.ERDAL(Student), 2011

BETİN CAN A., Model checking of apoptosis signaling pathways in lung cancers, Post Graduate, M.AYFER(Student), 2011

BETİN CAN A., BAYKAL N., A framework for ranking and categorizing medical documents, Doctorate, M.GH.(Student), 2010

BETİN CAN A., Environment generation tool for enabling aspect verification, Post Graduate, Ş.LOKMAN(Student), 2010

BETİN CAN A., Dosso-automatic detector of shared objects in multithreaded java programs, Post Graduate, M.TOLUBAEVA(Student), 2009

BETİN CAN A., Rearchitecturing an electronic warfare system based on service oriented architecture, Post Graduate, B.ERZURUMLU(Student), 2008

BETİN CAN A., Automated refactoring of design pattern implementations to aspect oriented counterparts, Post Graduate, A.BUĞDAYCI(Student), 2007

Designed Lessons

Betin Can A., Software Design Patterns, Doctorate, 2006 - 2007

Betin Can A., Software Design Patterns, Post Graduate, 2006 - 2007

Articles Published in Journals That Entered SCI, SSCI and AHCI Indexes

- **Multi-objective regression test selection in practice: An empirical study in the defense software industry**
Garousi V., Özkan R., Betin-Can A.
INFORMATION AND SOFTWARE TECHNOLOGY, vol.103, pp.40-54, 2018 (Journal Indexed in SCI)
- **A survey of software engineering practices in Turkey**
Garousi V., Coskuncay A., Betin-Can A., DEMIRORS O.
JOURNAL OF SYSTEMS AND SOFTWARE, vol.108, pp.148-177, 2015 (Journal Indexed in SCI)
- **Software test-code engineering: A systematic mapping**
Yusifoglu V. G. , Amannejad Y., Can A.

- INFORMATION AND SOFTWARE TECHNOLOGY, vol.58, pp.123-147, 2015 (Journal Indexed in SCI)
Web application testing: A systematic literature review
Dogan S., Betin-Can A., Garousi V.
- JOURNAL OF SYSTEMS AND SOFTWARE, vol.91, pp.174-201, 2014 (Journal Indexed in SCI)
A systematic mapping study of web application testing
Garousi V., Mesbah A., Betin-Can A., Mirshokraie S.
- INFORMATION AND SOFTWARE TECHNOLOGY, vol.55, pp.1374-1396, 2013 (Journal Indexed in SCI)
Modular Verification of Asynchronous Service Interactions Using Behavioral Interfaces
Betin-Can A., Hallé S., Bultan T.
- IEEE Transactions on Services Computing, vol.6, pp.262-275, 2013 (Journal Indexed in SCI Expanded)
A model based on multi-features to enhance healthcare and medical document retrieval
Al Zamil M. G. H. , Can A.
- INFORMATICS FOR HEALTH & SOCIAL CARE, vol.36, pp.100-115, 2011 (Journal Indexed in SCI)
ROLEX-SP: Rules of lexical syntactic patterns for free text categorization
Al Zamil M. G. H. , Can A.
- KNOWLEDGE-BASED SYSTEMS, vol.24, pp.58-65, 2011 (Journal Indexed in SCI)
Experimenting with software testbeds for evaluating new technologies
LINDVALL M., RUS I., DONZELLI P., MEMON A., ZELKOWITZ M., Betin-Can A., BULTAN T., ACKERMANN C., ANDERS B., ASGARI S., et al.
- EMPIRICAL SOFTWARE ENGINEERING, vol.12, pp.417-444, 2007 (Journal Indexed in SCI)
Highly dependable concurrent programming using design for verification
Betin-Can A., BULTAN T.
- FORMAL ASPECTS OF COMPUTING, vol.19, pp.243-268, 2007 (Journal Indexed in SCI)
Eliminating synchronization faults in air traffic control software via design for verification with concurrency controllers
Can A., Bultan T., LINDVALL M., Lux B., Topp S.
- AUTOMATED SOFTWARE ENGINEERING, vol.14, pp.129-178, 2007 (Journal Indexed in SCI)
MedicoPort: A medical search engine for all
Can A., Baykal N.
- COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, vol.86, pp.73-86, 2007 (Journal Indexed in SCI)

Articles Published in Other Journals

- **Interface-based specification and verification of concurrency controllers**
Betin-Can A., Bultan T.
Electronic Notes in Theoretical Computer Science, vol.89, pp.464-479, 2003 (Refereed Journals of Other Institutions)

Refereed Congress / Symposium Publications in Proceedings

- **Enhancing the Monte Carlo Tree Search Algorithm for Video Game Testing**
Ariyurek S., Betin Can A., Sürer E.
2020 IEEE Conference on Games (CoG), Osaka, Japan, 24 - 27 August 2020
- **Test Data Generation by Dynamic Symbolic Execution: A Systematic Literature Review**
BALCI H. İ. , BETİN CAN A., TARHAN A.
XIII. Ulusal Yazılım Mühendisliği Sempozyumu, İzmir, Turkey, 23 - 25 September 2019
- **Testte Çevresel Değişikliklerin Denetiminde Olay-Yönlendirmeli İzleme Yaklaşımı**
BETİN CAN A., alataş ş.
Ulusal yazılım mühendisliği sempozyumu, Turkey, 23 - 25 September 2019

● **Multi-Objective regression Test Selection in Practice: An Empirical study in Defence Software**

Industry

Özkan R., GAROUSİ V., BETİN CAN A.

ACM/IEEE International Symposium on empirical software engineering and measurement, Toronto, Canada, 9 - 10 October 2017

● **Ubiquitous Cloud-based Monitoring via a Mobile App in Smartphones: An Overview**

Al-Turjman F., Betin-Can A., Ever E., Alturjman S.

IEEE International Conference on Smart Cloud (IEEE SmartCloud), New-York, United States Of America, 18 - 20 November 2016, pp.196-201

● **Android Uygulamalar İcin Yazilim Kalite Yonetimi**

Şimşek M. V. , Betin Can A., Can B.

Ulusal Yazılım Mühendisliği Sempozyumu, Çanakkale, Turkey, 24 - 26 October 2016, pp.526-531

● **Android Uygulamalar İçin Yazilim Kalite Modeli**

Simsek M. V. , Betin-Can A., Can B.

10th Turkish National Software Engineering Symposium, UYMS 2016, Çanakkale, Turkey, 24 - 26 October 2016, vol.1721, pp.514-525

● **Web Uygulamalarında Dolaşım ve Erişim Kontrolü Hatalarının Tespiti ve Yeniden Canlandırılması**

YUDUM P., BETİN CAN A.

Ulusal Yazılım Mühendisliği Sempozyumu, Turkey, 9 - 11 September 2015

● **ANDROİD UYGULAMALARI BELLEK HATALARI YAKALANMASI VE ETKİLER**

Betin Can A., Sağlam İ. A.

Ulusal Yazılım Mühendisliği Sempozyumu - Turkish National Software Engineering Symposium, Güzelyurt, Cyprus (Kktc), 8 - 10 September 2014, pp.199-212

● **Türkiye deki Yazılım Test Uygulamaları Anketi**

GAROUSİ V., COŞKUNÇAY A., BETİN CAN A., DEMİRORS O.

ULUSAL YAZILIM MÜHENDİSLİĞİ SEMPOZYUMU, İzmir, Turkey, 25 - 27 September 2013

● **Bir Aviyonik Sistemin Yazılım ve Sistem Gereksinimlerinin Uyumluluğunun Model Denetleyici ile Değerlendirilmesi**

Betin Can A., Parlak M. A.

5. Ulusal Yazılım Mühendisliği Sempozyumu, Ankara, Turkey, 26 - 28 September 2011, pp.46-52

● **DETECTING EXECUTION AND HTML ERRORS IN ASP.NET WEB APPLICATIONS**

Ozknacı M. E. , Can A.

6th International Conference on Software and Database Technologies (ICSOF 2011), Sevilla, Spain, 18 - 21 July 2011, pp.172-178

● **Modular verification of synchronization with reentrant locks**

Bultan T., Yu F., Can A.

8th ACM/IEEE International Conference on Formal Methods and Models for Codesign, MEMOCODE 2010, Grenoble, France, 26 - 28 July 2010, pp.59-68

● **Automatic Detection of Shared Objects in Multithreaded Java Programs**

Tolubaeva M., Can A.

International Conference on Computational Intelligence for Modelling, Control and Automation, Vienna, Austria, 10 - 12 December 2008, pp.522-526

● **An assume guarantee verification methodology for aspect oriented programming**

Ispir M., Can A.

ASE 2008 - 23rd IEEE/ACM International Conference on Automated Software Engineering, L'Aquila, Italy, 15 - 19 September 2008, pp.391-394

● **Scalable Software Model Checking Using Design for Verification**

TEVFİK B., BETİN CAN A.

Verified Software: Theories, Tools, Experiments, Zürich, Switzerland, 10 - 13 November 2005, pp.337-346

● **Application of design for verification with concurrency controllers to air traffic control software**

Betin-Can A., Bultan T., Lindvall M., Lux B., Topp S.

20th IEEE/ACM International Conference on Automated Software Engineering, ASE 2005, Long Beach, CA, United States Of America, 7 - 11 November 2005, pp.14-23

● **Verifiable web services with hierarchical interfaces**

Betin-Can A., Bultan T.

2005 IEEE International Conference on Web Services, ICWS 2005, Orlando, FL, United States Of America, 11 - 15 July 2005, vol.2005, pp.85-94

● **Design for verification for asynchronously communicating Web services**

BETİN CAN A., TEVFİK B., XIANG F.

Proceedings of the 14th international conference on World Wide Web - WWW 'xx05, Chiba, Japan, 10 - 14 May 2005, pp.750-759

● **Verifiable concurrent programming using concurrency controllers**

Betin-Can A., Bultan T.

19th IEEE International Conference on Automated Software Engineering, Linz, Austria, 20 - 24 September 2004, pp.248-257

Other Publications

● **Automated Video Game Testing Using Synthetic and Human-Like Agents**

Arıyürek S., Betin Can A., Sürer E.

Other, pp.1-21, 2019

Supported Projects

BETİN CAN A., ÜNVER F., ÖZCAN İ. B. , HÖKELEKLİ G., Ever E., Project Supported by Higher Education Institutions, Bulut üzerinde algısal veriler ile iletişim kuran Mobil Uygulamalar ve Otomatik Test Yöntemleri: Bir Keşif Çalışması, 2016 - 2016

Betin Can A., TUBITAK Project, Koşut zamanlı ve Yaklaşım Dayalı Programlar için Otomatik Doğrulamaya Yönelik Tasarım, 2007 - 2008

Tasks In Event Organizations

Betin Can A., Karagöz P., Ulusal savunma uygulamaları modelleme ve simulasyon konferansı, Scientific Congress, Ankara, Turkey, Kasım 2019

Betin Can A., Erten Y. M. , Ayav T., ulusal yazılım mühendisliği sempozyumu, Scientific Congress, İzmir, Turkey, Eylül 2019

Betin Can A., Tarhan A., Yılmaz C., Yenigün H., Ertan Y. M. , ÖZKAN YILDIRIM S., Ulusal Yazılım Mühendisliği Sempozyumu, Scientific Congress, İstanbul, Turkey, Eylül 2018

Citations

Total Citations (WOS):233

h-index (WOS):8