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Kişisel Bilgiler

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Uluslararası Araştırmacı ID'leri

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Publons / Web Of Science ResearcherID: N-4741-2017

ScopusID: 55515138200

Yoksis Araştırmacı ID: 249121

Eğitim Bilgileri

Doktora, Boston University, Sistem Mühendisliği, Amerika Birleşik Devletleri 2010 - 2014

Yüksek Lisans, Ecole Polytechnique Fédérale de Lausanne, EPFL (The Federal Institute of Technology, Lausanne), Bilisim Mühendisliği, İsviçre 2008 - 2010

Lisans Yandal, Orta Doğu Teknik Üniversitesi, Fen Edebiyat Fakültesi, Matematik Bölümü, Türkiye 2005 - 2008

Lisans, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, Türkiye 2003 - 2008

Yaptığı Tezler

Doktora, Formal verification and controller synthesis for discrete-time systems, Boston University, Sistem Mühendisliği, 2014

Yüksek Lisans, Co-evolution for Roombots, Ecole Polytechnique Fédérale De Lausanne, Epfl (The Federal Institute Of Technology, Lausanne), Bilisim Mühendisliği, 2010

Araştırma Alanları

Kesikli Zaman Sistemleri ve Bilgisayarla Kontrol , Kuramsal Bilgisayar Bilimleri, Otomatik Problem Çözümü, Kuram Kanıtlanması ve Mantıksal Nedenleme, Yazılım

Akademik Unvanlar / Görevler

Dr. Öğr. Üyesi, Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2018 - Devam Ediyor

Yrd. Doç. Dr., Orta Doğu Teknik Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2016 - 2018

Yönetilen Tezler

Aydın Göl E., Synthesis of past time signal temporal logic formulas using monotonicity properties, Yüksek Lisans,

M.ERGÜRTUNA(Öğrenci), 2020

Aydın Göl E., Synthesis of signal temporal logic formulas with genetic algorithms, Yüksek Lisans, S.KAĞAN(Öğrenci), 2019

AYDIN GÖL E., Synthesis of formal control strategies for traffic systems, Yüksek Lisans, K.ÇAĞRI(Öğrenci), 2018

SCI, SSCI ve AHCI İndekslerine Giren Dergilerde Yayımlanan Makaleler

- I. **Cycle encoding-based parameter synthesis for timed automata safety**
Sucu B., AYDIN GÖL E.
Acta Informatica, cilt.61, sa.4, ss.333-356, 2024 (SCI-Expanded)
- II. **Field teams coordination for earthquake-damaged distribution system energization**
IŞIK İ., AYDIN GÖL E.
Reliability Engineering and System Safety, cilt.245, 2024 (SCI-Expanded)
- III. **MDP based real time restoration for earthquake damaged active distribution systems**
Arpali O. Y., Yilmaz U. C., GÜLDÜR ERKAL B., AYDIN GÖL E., GÖL M.
Electric Power Systems Research, cilt.218, 2023 (SCI-Expanded)
- IV. **An automated system repair framework with signal temporal logic**
Ergurtuna M., Yalcinkaya B., Aydın Göl E.
Acta Informatica, cilt.59, sa.2-3, ss.183-209, 2022 (SCI-Expanded)
- V. **TIMED AUTOMATA ROBUSTNESS ANALYSIS VIA MODEL CHECKING**
Bendik J., Sencan A., AYDIN GÖL E., Cerna I.
LOGICAL METHODS IN COMPUTER SCIENCE, cilt.18, sa.3, 2022 (SCI-Expanded)
- VI. **Control synthesis for parametric timed automata under reachability**
GOL E.
TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, cilt.29, sa.3, ss.1751-1764, 2021 (SCI-Expanded)
- VII. **Synthesis of Monitoring Rules with STL**
Aydın S. K., AYDIN GÖL E.
JOURNAL OF CIRCUITS SYSTEMS AND COMPUTERS, cilt.29, sa.11, 2020 (SCI-Expanded)
- VIII. **A Formal Methods Approach to Pattern Recognition and Synthesis in Reaction Diffusion Networks**
Bartocci E., AYDIN GÖL E., Haghighi I., Belta C.
IEEE TRANSACTIONS ON CONTROL OF NETWORK SYSTEMS, cilt.5, sa.1, ss.308-320, 2018 (SCI-Expanded)
- IX. **Formal Methods for Discrete-Time Dynamical Systems Background**
Belta C., Yordanov B., AYDIN GÖL E.
FORMAL METHODS FOR DISCRETE-TIME DYNAMICAL SYSTEMS, cilt.89, ss.257-271, 2017 (SCI-Expanded)
- X. **Traffic Network Control From Temporal Logic Specifications**
Coogan S., AYDIN GÖL E., Arcak M., Belta C.
IEEE TRANSACTIONS ON CONTROL OF NETWORK SYSTEMS, cilt.3, sa.2, ss.162-172, 2016 (SCI-Expanded)
- XI. **Temporal logic model predictive control**
AYDIN GÖL E., Lazar M., Belta C.
AUTOMATICA, cilt.56, ss.78-85, 2015 (SCI-Expanded)
- XII. **Finite Bisimulations for Switched Linear Systems**
AYDIN GÖL E., Ding X., Lazar M., Belta C.
IEEE TRANSACTIONS ON AUTOMATIC CONTROL, cilt.59, sa.12, ss.3122-3134, 2014 (SCI-Expanded)
- XIII. **Language-Guided Controller Synthesis for Linear Systems**
AYDIN GÖL E., Lazar M., Belta C.
IEEE TRANSACTIONS ON AUTOMATIC CONTROL, cilt.59, sa.5, ss.1163-1176, 2014 (SCI-Expanded)
- XIV. **Time-constrained temporal logic control of multi-affine systems**
AYDIN GÖL E., Belta C.
NONLINEAR ANALYSIS-HYBRID SYSTEMS, cilt.10, ss.21-33, 2013 (SCI-Expanded)

Diğer Dergilerde Yayınlanan Makaleler

- I. **Formel Yaklaşımlar ile Sürüm Değerlendirme**
AYDIN GÖL E.
Acta Infologica, cilt.5, sa.1, ss.129-140, 2021 (Hakemli Dergi)

Kitap & Kitap Bölümleri

- I. **Formal Methods for Discrete-Time Dynamical Systems**
Belta C., Yordanov B., Aydın Göl E.
Springer, London/Berlin , Chur, 2017
- II. **A Plume Tracking Algorithm Based on Crosswind Formations**
Lochmatter T., AYDIN GÖL E., Navarro I., Martinoli A.
Springer Tracts in Advanced Robotics, , Editör, Springer Berlin Heidelberg, ss.91-102, 2013

Hakemli Kongre / Sempozyum Bildiri Kitaplarında Yer Alan Yayınlar

- I. **Optimal Policy Synthesis from A Sequence of Goal Sets with An Application to Electric Distribution System Restoration**
Isik I., ARPALI O. Y., AYDIN GÖL E.
7th IFAC Conference on Analysis and Design of Hybrid Systems (ADHS), Brussels, Belçika, 7 - 09 Temmuz 2021, cilt.54, ss.271-276
- II. **MDP based Decision Support for Earthquake Damaged Distribution System Restoration**
ARPALI O. Y., YILMAZ U. C., AYDIN GÖL E., GÜLDÜR ERKAL B., GÖL M.
IEEE-PES General Meeting, 2 - 06 Ağustos 2020
- III. **Classification of Time-Series Data using ptSTL**
Ergurtuna M., Gol E.
28th Signal Processing and Communications Applications Conference (SIU), ELECTR NETWORK, 5 - 07 Ekim 2020
- IV. **Synthesis of Controllable ptSTL Formulas**
Saglam I., Gol E.
28th Signal Processing and Communications Applications Conference (SIU), ELECTR NETWORK, 5 - 07 Ekim 2020
- V. **Learning Parameters of ptSTL Formulas with Backpropagation**
Ketenci A., Gol E.
28th Signal Processing and Communications Applications Conference (SIU), ELECTR NETWORK, 5 - 07 Ekim 2020
- VI. **Synthesis of Monitoring Rules via Data Mining**
ketenci a., AYDIN GÖL E.
American Control Conference, 10 - 12 Temmuz 2019
- VII. **Clock Reduction in Timed Automata While Preserving Design Parameters**
Yancinkaya B., Aydın Göl E.
2019 IEEE/ACM 7th International Conference on Formal Methods in Software Engineering (FormaliSE), Montreal, Kanada, 27 Mayıs 2019
- VIII. **Optimizing Parameters of Signal Temporal Logic Formulas with Local Search**
Aydın S. K., AYDIN GÖL E.
27th Signal Processing and Communications Applications Conference (SIU), Sivas, Türkiye, 24 - 26 Nisan 2019
- IX. **Cause Mining and Controller Synthesis with STL**
Saglam I., AYDIN GÖL E.
58th IEEE Conference on Decision and Control (CDC), Nice, Fransa, 11 - 13 Aralık 2019, ss.4589-4594
- X. **An Efficient Formula Synthesis Method with Past Signal Temporal Logic**
Ergurtuna M., AYDIN GÖL E.

5th IFAC Conference on Intelligent Control and Automation Sciences (ICONS), Belfast, Birleşik Krallık, 21 - 23 Ağustos 2019, cilt.52, ss.43-48

- XI. **A Novel MDP Based Decision Support Framework to Restore Earthquake Damaged Distribution Systems**
AYDIN GÖL E., GÜLDÜR ERKAL B., GÖL M.
IEEE PES Innovative Smart Grid Technologies Europe (IEEE ISGT-Europe), Bucharest, Romanya, 29 Eylül - 02 Ekim 2019
- XII. **Formal Control of Traffic Systems via Network Decomposition**
Bardakci K. C., Aydın Göl E.
American Control Conference, Wisconsin, Amerika Birleşik Devletleri, 27 - 29 Haziran 2018
- XIII. **On the use of genetic algorithms for synthesis of signal temporal logic formulas**
Aydın S. K., Aydın Göl E.
2018 26th Signal Processing and Communications Applications Conference (SIU), İzmir, Türkiye, 2 - 05 Mayıs 2018
- XIV. **Efficient Online Monitoring and Formula Synthesis with Past STL**
Aydın Göl E.
2018 5th International Conference on Control, Decision and Information Technologies (CoDIT), Thessaloniki, Yunanistan, 10 - 13 Nisan 2018
- XV. **Trafik Ağlarını Bölüntüleyerek Formel Kontrol Stratejilerinin Üretilmesi**
Bardakci K. C., Aydın Göl E.
25. SİNYAL İŞLEME ve İLETİŞİM UYGULAMALARI KURULTAYI, Antalya, Türkiye, 15 - 18 Mayıs 2017
- XVI. **Synthesis of Formal Control Strategies for Traffic Networks via Partitioning**
Bardakci K. C., AYDIN GÖL E.
25th Signal Processing and Communications Applications Conference (SIU), Antalya, Türkiye, 15 - 18 Mayıs 2017
- XVII. **Controlling a network of signalized intersections from temporal logical specifications**
Coogan S., AYDIN GÖL E., Arcak M., Belta C.
2015 American Control Conference (ACC), Chicago, IL, USA, 1 - 03 Temmuz 2015
- XVIII. **A formal methods approach to pattern synthesis in reaction diffusion systems**
AYDIN GÖL E., Bartocci E., Belta C.
53rd IEEE Conference on Decision and Control, Los Angeles, CA, USA, 15 - 17 Aralık 2014
- XIX. **An additive cost approach to optimal Temporal Logic control**
AYDIN GÖL E., Belta C.
2014 American Control Conference, Portland, OR, USA, 4 - 06 Haziran 2014
- XX. **Temporal logic inference for classification and prediction from data**
Kong Z., Jones A., Medina A. A., AYDIN GÖL E., Belta C.
Proceedings of the 17th international conference on Hybrid systems: computation and control - HSCC '14, Berlin, Germany, 15 - 17 Nisan 2014
- XXI. **Data driven verification of synthetic gene networks**
AYDIN GÖL E., Densmore D., Belta C.
52nd IEEE Conference on Decision and Control, Firenze, 10 - 13 Aralık 2013
- XXII. **Temporal logic model predictive control for discrete time systems**
AYDIN GÖL E., Lazar M.
Proceedings of the 16th international conference on Hybrid systems: computation and control - HSCC '13, Philadelphia, Pennsylvania, USA, 8 - 11 Nisan 2013
- XXIII. **Finite bisimulations for switched linear systems**
AYDIN GÖL E., Ding X., Lazar M., Belta C.
2012 IEEE 51st IEEE Conference on Decision and Control (CDC), Maui, HI, USA, 10 - 13 Aralık 2012
- XXIV. **A Plume Tracking Algorithm Based on Crosswind Formations**
Lochmatter T., Goel E., Navarro I., Martinoli A.
10th International Symposium on Distributed Autonomous Robotic Systems, Lausanne, İsviçre, 1 - 03 Kasım 2010, cilt.83, ss.91-93
- XXV. **Language guided controller synthesis for discrete time linear systems**

AYDIN GÖL E., Lazar M., Belta C.

Proceedings of the 15th ACM international conference on Hybrid Systems: Computation and Control - HSCC '12, Beijing, China, 17 - 19 Nisan 2012, cilt.7, ss.320-322

XXVI. Experimentally driven verification of synthetic biological circuits

Yordanov B., Appleton E., Ganguly R., AYDIN GÖL E., Carr S. B., Bhatia S., Haddock T., Belta C., Densmore D.

2012 Design, Automation & Test in Europe Conference & Exhibition (DATE), Dresden, Almanya, 12 - 16 Mart 2012

XXVII. Time Constrained Temporal Logic Control of Multi Affine Systems

AYDIN GÖL E., Belta C.

4th IFAC Conference on Analysis and Design of Hybrid Systems, 06 Haziran 2012, cilt.45, ss.102-107

XXVIII. Locomotion Gait Optimization For Modular Robots; Coevolving Morphology and Control

Pouya S., Aydin E., Moeckel R., Ijspeert A. J.

2nd European Future Technologies Conference and Exhibition (FET), Budapest, Macaristan, 4 - 06 Mayıs 2011, cilt.7, ss.320-322

Desteklenen Projeler

Aydın Göl E., UFUK 2020 Projesi, Automating Timed Automata Design, 2018 - 2020

AYDIN GÖL E., AYDIN S. K., Yükseköğretim Kurumları Destekli Proje, Formel Metotlar Kullanılarak İzleme Sistemi Geliştirilmesi ve İzlenecek Metrik Gereksinimlerinin Veri Bazlı Sentezi, 2017 - 2019

AYDIN GÖL E., TÜBİTAK Projesi, Trafik Sistemlerinin Formel Metotlar Kullanılarak Kontrol Edilmesi, 2016 - 2017

Bilimsel Dergilerdeki Faaliyetler

Nonlinear Analysis-Hybrid Systems, Editörler Kurulu Üyesi, 2019 - Devam Ediyor

Bilimsel Hakemlikler

IFAC Conference on Analysis and Design of Hybrid Systems, Bildiri (Tam Metin), Şubat 2018

IFAC Conference on Analysis and Design of Hybrid Systems, Bildiri (Tam Metin), Şubat 2018

Metrikler

Yayın: 45

Atf (WoS): 221

Atf (Scopus): 340

H-İndeks (WoS): 9

H-İndeks (Scopus): 10