Assoc. Prof. MURAT CAN GANİZ

Personal Information

Office Phone: +90 216 777 3539 Extension: 3539

Fax Phone: +90 216 348 0293

Email: murat.ganiz@marmara.edu.tr

Web: https://mimoza.marmara.edu.tr/~murat.ganiz/

Address: Marmara Üniversitesi Mühendislik Fakültesi Bilgisayar Mühendisliği Bölümü M2-251 RTE Külliyesi, Maltepe, İstanbu

International Researcher IDs

ScholarID: Ho93Fu0AAAAJ

ORCID: 0000-0001-8338-991X

Publons / Web Of Science ResearcherID: AAG-9722-2019

ScopusID: 22034124700

Yoksis Researcher ID: 23878

Biography

Dr. Ganiz received his B.S. and M.S. in Computer Engineering from Selcuk University in 2000 and 2002 respectively. Following this he attained a Ph.D. degree in Computer Science from Lehigh University in U.S.A. in January 2008. He worked as a Data Mining Engineer at MySpace in Los Angeles between 2008 and 2009. He started working as an Assistant Professor in Dogus University in Fall 2009 and he joined Marmara University Computer Engineering Department in Fall 2015 where he is currently working as Associate Professor. Dr. Ganiz's research interests are in the general umbrella of Artificial Intelligence, more specifically Machine Learning and Deep Learning algorithms applied to the analysis of textual data and linked data.

Education

Doctorate, Lehigh University, Computer Science, Computer Science, United States Of America 2003 - 2008

Postgraduate, Selcuk University, Institute Of Science, Bilgisayar Mühendisliği (Yl) (Tezli), Turkey 2000 - 2002

Undergraduate, Selcuk University, Faculty Of Engineering, Department Of Computer Engineering, Turkey 1996 - 2000

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Higher-order path analysis for supervised machine learning, Lehigh University, Computer Science, 2008

Postgraduate, Üniversite akademik bilgi sistemi ve uygulaması, Selçuk Üniversitesi, Fen Bilimleri Enstitüsü, Bilgisayar Mühendisliği (Yl) (Tezli), 2002

Research Areas

Computer Sciences, Artificial Intelligence, Computer Learning and Pattern Recognition, Knowledge Engineering, Computer Learning, Natural Language Processing, Text/Document Processing, Neural Networks

Academic Positions

Assistant Professor, Marmara University, Faculty of Engineering, Computer Engineering, 2015 - Continues
Assistant Professor, Dogus University, Faculty Of Engıneerıng, Department Of Computer Engıneerıng, 2009 - Continues

Academic and Administrative Experience

Doğuş Üniversitesi, Mühendislik Fakültesi, Bilgisayar Mühendisliği Bölümü, 2011 - 2012

Courses

Doctorate
Natural Language Processing, Doctorate, 2021 - 2022
Undergraduate
Introduction to Data Science and Analytics, Undergraduate, 2020 - 2021
Object Oriented Software Design, Undergraduate, 2021 - 2022

Supervised Theses

Ganiz M. C., Combination Of Word Embeddings, Postgraduate, S.DEĞİRMENCİ(Student), 2019
Ganiz M. C., ÇİZGELERDE ETİKET YAYILIMI İLE BELGELERİN YARIEĞİTİMLİ SINIFLANDIRILMASI, Postgraduate, G.KOCAMAN(Student), 2019
GANİZ M. C., Semi-supervised classification of documents via label propagation in graphs, Postgraduate, G.Kocaman(Student), 2019
GANİZ M. C., Corpus-based semantic kernels for supervised and semi-supervised text classification, Doctorate, A.BERNA(Student), 2016
GANİZ M. C., MEANING BASED FEATURE SELECTION METHODS FOR TEXT CLASSIFICATION, Postgraduate, M.TUTKAN(Student), 2015
GANİZ M. C., EMPIRICAL COMPARISON OF NAÏVE BAYES EVENT MODELS AND SMOOTHING METHODS FOR TEXT CLASSIFICATION, Postgraduate, Z.HİLAL(Student), 2013
Ganiz M. C., Wikipedia based Semantic Smoothing for Twitter Sentiment Classification, Postgraduate, D.Torunoğlu(Student), 2013
Ganiz M. C., Uykan Z., Efficiency of Graph Clustering Algorithms GADIA and N-GAIR in Community Detection on Social Networks, Postgraduate, H.Burak(Student), 2013
GANİZ M. C., HIGHER-ORDER SEMANTIC SMOOTHING FOR TEXT CLASSIFICATION, Postgraduate, M.POYRAZ(Student), 2013
GANİZ M. C., SENTIMENT ANALYSIS ON TURKISH PRODUCT REVIEWS, Postgraduate, E.ÇAKIRMAN(Student), 2013

Journal articles indexed in SCI, SSCI, and AHCI

I. **Word sense disambiguation using semantic kernels with class-based term values**
    Altinel B., GANİZ M. C., Sipal B., Erkaya E., Yucedag O. C., Dogan M. A.
    TURKISH JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCES, vol.27, no.4, pp.3180-3194, 2019
    (SCI-Expanded)

II. **Semantic text classification: A survey of past and recent advances**
Altinel B., GANİZ M. C.
INFORMATION PROCESSING & MANAGEMENT, vol.54, no.6, pp.1129-1153, 2018 (SCI-Expanded)

III. **Instance labeling in semi-supervised learning with meaning values of words**
Altinel B., GANİZ M. C., DİRİ B.
ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE, vol.62, pp.152-163, 2017 (SCI-Expanded)

IV. **A new hybrid semi-supervised algorithm for text classification with class-based semantics**
Altinel B., GANİZ M. C.
KNOWLEDGE-BASED SYSTEMS, vol.108, pp.50-64, 2016 (SCI-Expanded)

V. **Helmholtz principle based supervised and unsupervised feature selection methods for text mining**
Tutkan M., GANİZ M. C., AKYOKUŞ S.
INFORMATION PROCESSING & MANAGEMENT, vol.52, no.5, pp.885-910, 2016 (SCI-Expanded)

VI. **Higher-Order Smoothing: A Novel Semantic Smoothing Method for Text Classification**
Poyraz M., Kilimci Z. H., Ganiz M. C.
JOURNAL OF COMPUTER SCIENCE AND TECHNOLOGY, vol.29, no.3, pp.376-391, 2014 (SCI-Expanded)

VII. **The Benchmark of Paragraph and Sentence Extraction Summaries using Outlier Document Filtering based Multi -Document Summarizer**
Turan M., Sonmez C., Ganiz M. C.
INFORMATION TECHNOLOGY AND CONTROL, vol.43, no.4, pp.433-439, 2014 (SCI-Expanded)

VIII. **Higher Order Naive Bayes: A Novel Non-IID Approach to Text Classification**
Ganiz M. C., George C., Pottenger W. M.
IEEE TRANSACTIONS ON KNOWLEDGE AND DATA ENGINEERING, vol.23, no.7, pp.1022-1034, 2011 (SCI-Expanded)

Articles Published in Other Journals

I. **Identifying Topic-based Opinion Leaders in Social Networks by Content and User Information**
ALTINEL A. B., HAKKOZ M. A., BOZDAĞ E. B., GANİZ M. C.
International Journal of Intelligent Systems and Applications in Engineering, vol.8, no.4, pp.214-220, 2020 (Scopus)

Papers Presented at Peer-Reviewed Scientific Conferences

I. **Deep Learning-Based Brain Hemorrhage Detection in CT Reports**
Bayrak G., Toprak M. S., GANİZ M. C., Kodaz H., Koç U.
32nd Medical Informatics Europe Conference, MIE 2022, Nice, France, 27 - 30 May 2022, vol.294, pp.866-867, (Full Text)

II. **Biomedical Named Entity Recognition Using Transformers with biLSTM + CRF and Graph Convolutional Neural Networks**
Celikmasat G., Enes Akturk M., Emre Ertunc Y., Majeed Issifu A., GANİZ M. C.
16th International Conference on INnovations in Intelligent SysTems and Applications, INISTA 2022, Biarritz, France, 8 - 12 August 2022, (Full Text)

III. **Individual Stock Price Prediction by Using KAP and Twitter Sentiments with Machine Learning for BIST30**
Sariyer M., Akil A., Bulgurcu F. N., Oge F. E., GANİZ M. C.
16th International Conference on INnovations in Intelligent SysTems and Applications, INISTA 2022, Biarritz, France, 8 - 12 August 2022, (Full Text)

IV. **Traditional Machine Learning and Deep Learning-based Text Classification for Turkish Law Documents using Transformers and Domain Adaptation**
Akca O., Bayrak G., Issifu A. M., GANİZ M. C.

16th International Conference on INnovations in Intelligent SysTems and Applications, INISTA 2022, Biarritz, France, 8 - 12 August 2022, (Full Text)

V. **IT Support Ticket Completion Time Prediction**
Yildiz M., Alsac A., Ulusinan T., GANİZ M. C., YENİSEY M. M.
7th International Conference on Computer Science and Engineering, UBMK 2022, Diyarbakır, Turkey, 14 - 16 September 2022, pp.198-203, (Full Text)

VI. **A Simple Data Augmentation Method to Improve the Performance of Named Entity Recognition Models in Medical Domain**
Issifu A. M., GANİZ M. C.
2021 6th International Conference on Computer Science and Engineering (UBMK), Ankara, Turkey, 15 September - 17 November 2021, pp.763-768, (Full Text)

VII. **Descriptive and Prescriptive Analysis of Construction Site Incidents Using Decision Tree Classification and Association Rule Mining**
uğur ö., ARISOY A. A., GANİZ M. C., bolaç b.
2021 International Conference on INnovations in Intelligent SysTems and Applications (INISTA), Kocaeli, Turkey, 25 August 2021, pp.1-6, (Full Text)

VIII. **Log and Execution Trace Analytics System**
Abbasli N., GANİZ M. C.
2021 International Conference on INnovations in Intelligent SysTems and Applications (INISTA), Kocaeli, Turkey, 25 August 2021, pp.1-7, (Full Text)

IX. **A new cluster-aware regularization of neural networks**
Kalaycı T. A., Asan U., GANİZ M. C., Gerek A.
International Conference on Intelligent and Fuzzy Systems, INFUS 2019, İstanbul, Turkey, 23 - 25 July 2019, vol.1029, pp.346-353, (Full Text)

X. **Combining Lexical and Semantic Similarity Methods for News Article Matching**
Şen M. U., Erdinç H. Y., Yavuzalp B., GANİZ M. C.
International Data Science Conference (iDSC 2019), Austria, 13 - 14 May 2019, pp.29-35, (Full Text)

XI. **Diffused Label Propagation based Transductive Classification Algorithm for Word Sense Disambiguation**
KOCAMAN G., ŞİPAL B., AYDIN G., ALTINEL A. B., GANİZ M. C.
In 2019 IEEE International Symposium on INnovations in Intelligent SysTems and Applications, 3 - 05 July 2019, pp.1-6, (Full Text)

XII. **Effects of Positivization on the Paragraph Vector Model**
Gerek A., Yuney M. C., Erkaya E., GANİZ M. C.
2019 IEEE International Symposium on INnovations in Intelligent SysTems and Applications, INISTA 2019, Sofija, Bulgaria, 3 - 05 July 2019, (Full Text)

XIII. **Waste Not: Meta-Embedding of Word and Context Vectors**
Değirmenci S., Gerek A., GANİZ M. C.
24th International Conference on Application of Natural Language to Information Systems, NLDB 2019, Salford, United Kingdom, 26 - 28 June 2019, pp.393-401, (Full Text)

XIV. **Document Embedding based Supervised Methods for Turkish Text Classification**
Celenli H. I., Ozturk S. T., Sahin G., Gerek A., GANİZ M. C.
3rd International Conference on Computer Science and Engineering (UBMK), Sarajevo, Bosnia And Herzegovina, 20 - 23 September 2018, pp.477-482, (Full Text)

XV. **Improving Twitter Sentiment Classification Using Term Usage and User Based Attributes**
AKYOKUŞ S., GANİZ M. C., Gümüş C.
IMMM 2017 : The Seventh International Conference on Advances in Information Mining and Management, Venedik, Italy, 25 - 29 June 2017, pp.47-51, (Full Text)

XVI. **Machine Learning Based Electricity Demand Forecasting**
Camurdan Z., GANİZ M. C.
2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October

2017, pp.412-417, (Full Text)

XVII. **Preprocessing Framework for Twitter Bot Detection**
Kantepe M., GANİZ M. C.
2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.630-634, (Full Text)

XVIII. **A Machine Learning Approach to Database Failure Prediction**
Karakurt I., Ozer S., Ulusinan T., GANİZ M. C.
2017 International Conference on Computer Science and Engineering (UBMK), Antalya, Turkey, 5 - 08 October 2017, pp.1030-1035, (Full Text)

XIX. **A Feature Based Simple Machine Learning Approach with Word Embeddings to Named Entity Recognition on Tweets**
Taspinar M., GANİZ M. C., ACARMAN T.
22nd International Conference on Applications of Natural Language to Information Systems (NLDB), Liege, Belgium, 21 - 23 June 2017, vol.10260, pp.254-259, (Full Text)

XX. **Semi-Supervised Learning using Higher-Order Co-occurrence Paths to Overcome the Complexity of Data Representation**
GANİZ M. C.
IEEE International Conference on Systems, Man, and Cybernetics (SMC), Budapest, Hungary, 9 - 12 October 2016, pp.2242-2247, (Full Text)

XXI. **A Novel Classifier Based on Meaning for Text Classification**
Ganiz M. C., Tutkan M., Akyokus S.
International Symposium on Innovations in Intelligent SysTems and Applications (INISTA 2015), Madrid, Spain, 2 - 04 September 2015, pp.462-466, (Full Text)

XXII. **Evaluation of Classification Models for Language Processing**
Kilimci Z. H., Ganiz M. C.
International Symposium on Innovations in Intelligent SysTems and Applications (INISTA 2015), Madrid, Spain, 2 - 04 September 2015, pp.454-461, (Full Text)

XXIII. **Metin Sınıflandırma için Eğitimsiz bir Anlamsal Özellik Seçimi Yöntemi**
TUTKAN M., GANİZ M. C., AKYOKUŞ S.
Elektrik – Elektronik – Bilgisayar ve Biyomedikal Mühendisliği Sempozyumu (ELECO 2014), Turkey, 27 - 29 November 2014, (Full Text)

XXIV. **Metin Sınıflandırma için Yeni Bir Eğitimli Anlamsal Özellik Seçimi Yöntemi**
MELİKE T., GANİZ M. C., AKYOKUŞ S.
Akıllı Sistemlerde Yenilikler ve Uygulamalar Sempozyumu (ASYU 2014), Turkey, 9 - 10 October 2014, (Full Text)

XXV. **A Simple Semantic Kernel Approach for SVM using Higher-Order Paths**
Altinel B., Ganiz M. C., Diri B.
IEEE International Symposium on Innovations in Intelligent Systems and Applications (INISTA), Alberobello, Italy, 23 - 25 June 2014, pp.431-436, (Full Text)

XXVI. **A Simple Semantic Kernel Approach for SVM using Higher Order Paths**
ALTINEL A. B., GANİZ M. C., DİRİ B.
INISTA 2014, 23 - 25 June 2014, pp.431-435, (Full Text)

XXVII. **A Semantic Kernel for Text Classification Based on Iterative Higher Order Relations between Words and Documents**
ALTINEL A. B., GANİZ M. C., DİRİ B.
The 13th International Conference on Artificial Intelligence and Soft Computing, 1 - 05 June 2014, vol.8467, pp.505-517, (Full Text)

XXVIII. **A Novel Higher Order Semantic Kernel for Text Classification**
ALTINEL A. B., GANİZ M. C., DİRİ B.
ICECCO 2013,10th International Conference on Electronics, Computer and Computation, 7 - 09 November 2013, pp.216-219, (Full Text)

XXIX. **A Novel Higher-Order Semantic Kernel for Text Classification**

Altinel B., GANİZ M. C., Diri B.

10th International Conference on Electronics, Computer and Computation (ICECCO), Ankara, Turkey, 7 - 09 November 2013, pp.216-219, (Full Text)

XXX. **NMF based Dimension Reduction Methods for Turkish Text Clustering**

Guran A., Ganiz M. C., Naiboglu H. S., Kaptikacti H. O.

IEEE International Symposium on INnovations in Intelligent SysTems and Applications (INISTA), Bulgaria, 19 - 21 June 2013, (Full Text)

XXXI. **An Application of Community Discovery in Academical Social Networks**

Arslan E., Akyokus S., Ganiz M. C.

IEEE International Symposium on INnovations in Intelligent SysTems and Applications (INISTA), Bulgaria, 19 - 21 June 2013, (Full Text)

XXXII. **Wikipedia Based Semantic Smoothing for Twitter Sentiment Classification**

Torunoglu D., Telseren G., Sagturk O., Ganiz M. C.

IEEE International Symposium on INnovations in Intelligent SysTems and Applications (INISTA), Bulgaria, 19 - 21 June 2013, (Full Text)

XXXIII. **Exploiting Turkish Wikipedia as a Semantic Resource for Text Classification**

Poyraz M., GANİZ M. C., AKYOKUŞ S., Görener B., KİLİMCİ Z. H.

International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2012), 2 - 04 July 2012, (Full Text)

XXXIV. **A Novel Semantic Smoothing Method based on Higher Order Paths for Text Classification**

Poyraz M., Kilimci Z. H., Ganiz M. C.

12th IEEE International Conference on Data Mining (ICDM), Brussels, Belgium, 10 - 13 December 2012, pp.615-624, (Full Text)

XXXV. **Discrete-Time Hopfield Neural Network Based Text Clustering Algorithm**

Uykan Z., Ganiz M. C., Sahinli C.

19th International Conference on Neural Information Processing (ICONIP), Doha, Qatar, 11 - 15 November 2012, vol.7663, pp.551-559, (Full Text)

XXXVI. **Intelligent focused crawler learning which links to crawl**

TAYLAN D., POYRAZ M., AKYOKUŞ S., GANİZ M. C.

Innovations in Intelligent Systems and Applications (INISTA 2011), 15 - 18 June 2011, (Full Text)

XXXVII. **Application of the SpecHybrid Algorithm to Text Document Clustering Problem**

UYKAN Z., GANİZ M. C.

International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2011), 15 - 18 June 2011, (Full Text)

XXXVIII. **An Anomaly Detection Framework for BGP**

Inigo Ortiz d. U. C., Erkan K., GANİZ M. C.

International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2011), 15 - 18 June 2011, (Full Text)

XXXIX. **Analysis of Preprocessing Methods on Classification of Turkish Texts**

dilara t., Çakırman E., GANİZ M. C., AKYOKUŞ S., Gürbüz Z.

International Symposium on INnovations in Intelligent SysTems and Applications (INISTA 2011), 15 - 18 June 2011, (Full Text)

XL. **Leveraging Higher Order Dependencies between Features for Text Classification**

Ganiz M. C., Lytkin N. I., Pottenger W. M.

Joint European Conference on Machine Learning (ECML)/European Conference on Principles and Practice of Knowledge Discovery in Databases (PKDD), Bled, Slovenia, 7 - 11 September 2009, vol.5781, pp.375-377, (Full Text)

XLI. **Mining Higher Order Association Rules from Distributed Named Entity Databases**

Li S., Janneck C., Belapurkar A., GANİZ M. C., Yang X., Dilsizian M., Wu T., Bright J., Pottenger W.

IEEE Intelligence and Security Informatics (ISI 2007), 23 - 25 May 2007, (Full Text)

XLII. **Link Analysis of Higher Order Paths in Supervised Learning Datasets**

GANİZ M. C., Yang X., Pottenger W. M.

In Proceedings of the Workshop on Link Analysis, Counterterrorism and Security, 2006 SIAM Conference on Data Mining, 01 April 2006, (Full Text)

XLIII. **Detection of interdomain routing anomalies based on higher-order path analysis**

Ganiz M. C., Kanitkar S., Chuah M. C., Pottenger W. M.

6th IEEE International Conference on Data Mining, Hong Kong, PEOPLES R CHINA, 18 - 22 December 2006, pp.874-879, (Full Text)

Funded Projects

Altınel Girgin A. B., Ganiz M. C., TUBITAK Project, Metin Sınıflandırması için Semantik Gözetimli ve Yarı Gözetimli Kelime Kalıplama Algoritmalarının Geliştirilmesi, 2017 - 2019

Ganiz M. C., TUBITAK Project, Dil İşlemede Eğitimli Ve Yarı-Eğitimli Sınıflandırma İçin Anlamsal İlişkileri Ortaya Çıkartan Bölüşümlü Kelime Temsili Yöntemlerinin Geliştirilmesi, 2017 - 2019

Ganiz M. C., TUBITAK Project, "Metinsel Veri Madenciliği için Anlamsal Yarı Eğitimli Algoritmaların Geliştirilmesi", 2012 - 2015

Ganiz M. C., TUBITAK Project, METİNSEL VERİ MADENCİLİĞİ İÇİN ANLAMSAL YARI EĞİTİMLİ ALGORİTMALARIN GELİŞTİRİLMESİProje NO 111E239, 2012 - 2015

Memberships and Roles in Scientific Organizations

IEEE, Principal Member, 2006 - Continues

BILTEG, Executive Board Member, 2019 - 2020, Turkey

ARDEB, Consultant, 2015 - 2019

Scientific Consultations

ENKA Systems R&D Center, Scientific Consultancy, Marmara University, Faculty of Engineering, Computer Engineering, Turkey, 2020 - Continues

Metrics

Publication: 52

Citation (WoS): 266

Citation (Scopus): 532

H-Index (WoS): 10

H-Index (Scopus): 13

Entrepreneurship Activities

Limited, VeriUs Teknoloji ltd sti, 01 June 2013, Partner

Non Academic Experience

VeriUs Teknoloji Ltd. Şti., Kurucu Ortak

MySpace - Fox Interactive Media, Data Mining Engineer