Caner Ozcan, Ph.D.
Karabuk University, Faculty of Engineering,
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Education:

Ph.D.	2011-2015, Department of Computer Engineering, Graduate School of Natural and Applied Science, Karabuk University. Title: SAR Image Despeckling by Using Non-Local Means and Mixed Norms. Supervisors: Assoc.Prof.Dr. Baha SEN and Assoc.Prof.Dr. Fatih NAR.
M.S.	2008-2011, Department of Computer Engineering, Graduate School of Natural and Applied Science, Karabuk University
B.A.	2004-2008, Department of Computer Engineering, Faculty of Electrical and Electronics, Yildiz Technical University

Academic Experiences:

Assistant Professor	2021-…. Department of Software Engineering, Faculty of Engineering, Karabuk University, Turkey
Assistant Professor	2016-2021 Department of Computer Engineering, Faculty of Engineering, Karabuk University, Turkey
Visiting Professor	2017-2018 School of Electrical and Computer Engineering, Purdue University, Indiana, USA. Supervisor: Prof. Okan Ersoy.
Research Assistant	2008-2016 Department of Computer Engineering, Faculty of Engineering, Karabuk University, Turkey

Research Projects:

Project Coordinator	Project Name: Detection and Classification of Cancer on Bone Tissue Using Deep Learning Approaches, Tubitak 1002 Fast Support Project, Project Number: 122E636, (2022 Dec. – ..)
	Project Name: Real-Time Classification of Wood Materials Used in Massive Panel Production by Deep Learning Method, Karabuk University, SRCU, Project Number: KBÜBAP-22-YL-096, (2022 Jul. – ..)
	Project Name: Automatic Analysis of Dentistry Images using Artificial Intelligence (Dentiassist), Tubitak 1512 Techno-entrepreneurship Capital Support Program (BIGG), Proje No: 2200272, (2020 Oct. – 2021 Nov.)
	Project Name: Processing of Hyperspectral Images Using Dimension Reduction Methods, Karabuk University, SRCU, Project Number: FDT-2020-2315, (2020 Jul. – 2021 Nov.)
	Project Name: Classification and Visualization of Hyperspectral Images Using Particle Swarm Optimization Based Layered Space Insertion Method, Tubitak 1002 Fast Support Project, Project Number: 120E404, 2020 Nov. – 2021

Project Name: EEG and Forehead EOG Based Emotion Analysis with Deep Neural Networks, Karabuk University, SRCU, Project Number: FDK-2020-2309, (2020 Jul. – 2022 Aug.)

Project Name: Deep Instance Segmentation of UI Elements in Hand Drawn Sketches, Karabuk University, SRCU, Project Number: FYL-2020-2156, (2020 Apr. – 2021 Nov.)

Project Name: Analysis of Large Dimensional Images Using Apache Spark, Karabuk University, SRCU, Project Number: FYL-2019-2044, (2019-2020)

Project Name: Classification of Big Data with Machine Learning Methods Using Apache Spark Technology, Karabuk University, SRCU, Project Number: KBÜBAP-17-YL-072, (2016-2017)

Researcher	Yildirim Beyazit University, SRCU, Project Number: YBU-BAP-590, Project Name: A Hybrid Method for Noise Reduction on SAR Images (2013-2015)
Scholarship Student	The Scientific and Technological Research Council of Turkey, Project Number: 110O548, Computer Aided Combustion Mechanism of Wooden Materials (2011-2013)

Membership in Professional Organizations:

SPIE (2014-..) and IEEE (2012-..)

Research Areas:

Machine Learning, Deep Learning, Image Processing, Optimization Algorithms, Parallel Programming, Big Data Analytics, Remote Sensing.

Publications:

A. <u>Articles published in international peer-reviewed journals:</u>

Karaoglu, A., **Özcan, C.**, Pekince, A., Yaşa, Y., Numbering Teeth in Panoramic Images: A Novel Method Based on Deep Learning and Heuristic Algorithm, Engineering Science and Technology, an International Journal, Nov. 2022 (accepted).

Çizmeci, H., **Özcan, C.**, Enhanced deep capsule network for EEG-based emotion recognition, Signal, Image and Video Processing, 2022.

Çizmeci, H., **Özcan, C.**, Durgut, R., Channel selection and feature extraction on deep EEG classification using metaheuristic and Welch PSD, Soft Computing, 26 (19): 10115-10125, Oct. 2022

Tekin, B.Y., **Özcan, C.**, Pekince, A., Yaşa, Y., An enhanced tooth segmentation and numbering according to FDI notation in bitewing radiographs, Computers in Biology and Medicine, 146 (105547): 1-10, Apr. 2022.

Elawady, I., **Özcan, C.**, A new effective denoising filter for high density impulse noise reduction, Turk J Elec Eng & Comp Sci, 30 (4) pp. 1388-1403, Jan. 2022.

Karaoglu, A., **Ozcan, C.**, Pekince, A., Yaşa, Y., Tekin, B.Y., Ozdemir, D., Automatic Dental Segmentation Module Supported by Artificial Intelligence for Dentistry Students Education, Artificial Intelligence Theory and Applications 1(2): 180-190 (Special Issue), 2021.

Yildirim, M.Z., **Ozcan**, **C.,** and Ersoy, O., Optimization based manifold embedding for hyperspectral image classification and visualization, Remote Sensing Letters, 12:11, 1158-1166, 2021.

Ozcan, C., Ersoy, O., Ogul, I.U., Fast Texture Classification of Denoised SAR Image Patches Using GLCM on Spark, Turk J Elec Eng & Comp Sci, 28: 182-195, 2020.

Ozcan, C., Ersoy, O., Enhanced multidimensional field embedding method by potential fields for hyperspectral image classification and visualization, Electronics Letters, 54(12): 756–758, 2018.

Erdem, Y., O**zcan, C.,** Fast Data Clustering and Outlier Detection Using K-Means Clustering on Apache Spark, Int. Journal of Advanced Computational Engineering and Networking, 5(7):86-90, Jul. 2017.

Kazangirler, C. B., **Ozcan, C.,** Establishment of Educational Network among the Undergraduate with Mobile Application, Int. Journal of Advances in Electronics and Computer Science, 4(3):22-26, Mar. 2017.

Ozcan, C., Sen, B., and Nar, F., Sparsity-Driven Despeckling for SAR Images, IEEE Trans. Geosci. Remote Sens., 13 (1): 115-119, Nov. 2015.

B. Articles published in national peer-reviewed journals:

Özkan, M., **Özcan, C.,** Knot Detection and Segmentation with Deep Learning on Lamellas Used in Solid Panel Production, Veri Bilimi Dergisi, 5(2), 1-8, 2022.

Çakmaklı, B.D., **Özcan, C.** (2021) Automatic Ship Detection and Classification using Machine Learning from Remote Sensing Images on Apache Spark, Journal of Intelligent Systems: Theory and Applications, 4 (2) pp. 94-102.

Yildirim, M.Z., **Ozcan, C.,** and Ersoy, O., Hiperspektral Görüntülerin Sınıflandırılmasında Farklı Boyut İndirgeme Yöntemlerinin Karşılaştırılması, Academic Platform Journal of Engineering and Science 9-1, 159-165, 2021.

Köprü, E.Y., **Özcan, C.,** Yapay Sinir Ağları ile Sıvı Ham Demir Tahmini ve 5.Yüksek Fırın Uygulaması, Avrupa Bilim ve Teknoloji Dergisi Özel Sayı, S. 155-162, Kasım 2020.

Cavusoglu, A., Sen, B., **Ozcan, C.,** and Gorgunoglu, S., Cropped Quad-Tree Based Solid Object Coloring With Cuda, Mathematical and Computational Applications, 18(3):301-312, 2013.

Ozcan, C., Bayir, R., and **Ozcan, C.,** Monitoring of Wooden Material Combustion Performance with Fuzzy Logic, Technology, 13(3), 189-199, 2010.

C. Papers presented at international scientific meetings and published on the book:

Kazangirler, C.B., **Özcan, C.,** Tekin, B.Y., Ön Eğitimli Evrişimli Sinir Ağları ile UI Öğelerinin Tespiti ve Sınıflandırılması, 5th International Conference on Data Science and Applications (ICONDATA'22) , (pp. 100-107), Muğla, Türkiye, Ekim 2022.

Taşar, D.E., **Özcan, C.,** Koruyan, K., Autotrain Yaklaşımı İle Duygu Analizi, 2nd International Conference on Artifical Intelligence Studies, (pp. 30-38), Ankara, Türkiye, Eylül 2022.

Kazangirler, C.B., **Özcan, C.,** Üniversitesi, K., Fakültesi, M. (2021) Elle Çizilmiş Taslak Çizimlerde Kullanıcı Arabirimi Öğelerinin Derin Örnek Segmentasyonu, International Conference on Data Science and Applications (ICONDATA'21), Türkiye, (Haziran 2021)

Tekin, B.Y., **Ozcan, C.,** Pekince, A., Yasa, Y., Karaoglu, A., Cilek, S., Ozdemir, D., Meseci, E., Tooth Detection and Numbering with Instance Segmentation in Panoramic Radiographs, International Conference on Interdisciplinary Applications of Artificial Intelligence (ICIDAAI), 1st, Online, 21-23 May, 2021.

Karaoglu, A. , **Ozcan, C.,** Pekince, A., Yasa, Y., Meseci, E., Cilek, S., Segmentation of Bitewing Intraocular X-Ray Images with Mask R-CNN Deep Learning Model, International Artificial Intelligence Health Congress 2021, 2nd, Online, Apr 16-18, 2021.

Çelik, M.Ç., **Özcan, C.**, Pekince, A., Atlas vertebra kemiğinin bölge tabanlı eşik yöntemi kullanılarak otomatik morfometrik ölçümü, The International Symposium of Scientific Research and Innovative Studies (ISSRIS'21), (pp. 940-954), Türkiye, (Mart 2021)

Dolapci, B., **Ozcan, C.**, Renk ve Doku Özellikleri Kullanılarak Apache Spark Üzerinde Gemi Tespiti, International Conference on Data Science and Applications, 3rd, Page(s): 301-309, İstanbul, Turkey, 25-28 June, 2020.

Kayali, P.B., **Ozcan, C.**, Durgut, R., Game Design for Rehabilitation of Children with Disabilities by Using Depth Sensor, 2nd International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES), 26-28 Apr, Alanya, Turkey, 2019

Ozcan, C., Ersoy, O., Ogul, I.U., Classification of SAR Image Patches with Apache Spark Using GLCM Texture Features, International Conference on Advanced Technologies, 3rd World Conference on Big Data (WC-BIGDATA 2018), 28-30 Apr., Izmir, Turkey, 2018

Durgut, R., **Ozcan, C.**, Findik, O., Automatic Segmentation and Labelling of 3D Human Activities, International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES), 11-13 May, Karabuk, Turkey, 2018

Ozturk, Y., **Ozcan, C.**, Implementation of NURBS curves on the LCD touch screen using FPGA, International Conference on Advanced Technologies, Computer Engineering and Science (ICATCES), 11-13 May, Karabuk, Turkey, 2018

Akinci, İ.B., **Ozcan, C.**, Real-Time Automation System for Classifying Fruits with Image Processing, International Symposium on Industry 4.0 and Applications, 12-14 Oct., Karabuk, Turkey, 2017.

Yildirim, M. Z. and **Ozcan, C.**, Extraction of Greenhouse Areas with Image Processing Methods in Karabuk Province, Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLII-4/W6, 107-109, 2017.

Ozcan, C., Sen, B., Nar, F., GPU Efficient SAR Image Despeckling Using Mixed Norms, Proc. SPIE 9247: High-Performance Computing in Remote Sensing IV, Amsterdam, Netherlands, 2014.

Sen, B., **Ozcan, C.**, Aydin Atasoy, N., An Implementation for Quad-Tree Based Solid Object Coloring Using Cuda, Proceedings on 2nd World Conference on Information Technology, Antalya, Turkey, 2011.

Sen, B., Aydin Atasoy, N., **Ozcan, C.**, Performance Comparison of Gauss-Jordan Elimination Method Using Openmp and Cuda, Proceedings on 2nd World Conference on Information Technology, Antalya, Turkey, 2011.

Ozcan, C., Sen, B., Investigation of the Performance of LU Decomposition Method Using CUDA, Proceedings on 2nd World Conference on Innovation and Software Development, Istanbul, Turkey, 2011.

Ozcan, C., Bayir, R., Ozcan, C., Fuzzy Logic Graphical User Interface Software for Evaluation of Wooden Material Combustion Performance, Proceedings on 2nd International Symposium on Computing in Science & Engineering, P:483-485, Kusadası, Turkey, 2011.

Ozcan, C., Uysal, A., Bayir, R., Real Time Control via Matlab/Simulink of DC-DC Buck Converter with Fuzzy Logic Controller, FUZZYSS'09: 1st International Fuzzy Systems Symposium, Ankara, Turkey, 1-2 October, 2009.

D. Papers presented at national scientific meetings and published on the book:

Gençay, S., **Özcan, C.**, SAR-Optik Görüntü Füzyonunda SAR Benek Gürültüsünün Giderilme Etkisi, 30. IEEE SİNYAL İŞLEME ve İLETİŞİM UYGULAMALARI KURULTAYI, Karabük, Türkiye, Mayıs 2022.

Cizmeci, H., **Ozcan, C.**, Evrişimsel Sinir Ağları ile EEG Tabanlı Duygu Tanıma, IEEE Signal Processing and Communications Applications Conference (SIU), 28th, Online, 5-7 Oct, 2020.

Ogul, I.U., **Ozcan, C.**, Hakdagli, O, Keyword Extraction Based on word Synonyms Using WORD2VEC , IEEE Signal Processing and Communications Applications Conference (SIU), 27th, Sivas, Turkey, 24-26 Apr, 2019.

Hakdagli, O, **Ozcan, C.**, Ogul, I.U., Stream Text Data Analysis on Twitter Using Apache Spark Streaming, IEEE Signal Processing and Communications Applications Conference (SIU), 26th, Page(s): -, Izmir, Turkey, 2-5 May, 2018.

Ogul, I.U., **Ozcan, C.**, Hakdagli, O, Fast Text Classification with Naive Bayes Method on Apache Spark, IEEE Signal Processing and Communications Applications Conference (SIU), 2017 25th, Page(s): -, Antalya, Turkey, 15-18 May, 2017.

Ogul, I.U., **Ozcan, C.**, Hakdagli, O, Text Classification with Spark Support Vector Machine, 1. National Cloud Computing and Big Data Symposium B3S'17, Antalya, Turkey, 19-20 Ekim, 2017.

Ozcan, C., Sen, B., Nar, F., Sparsity-Driven Despeckling Method with Low Memory Usage, IEEE Signal Processing and Communications Applications Conference (SIU), 2016 24nd, Page(s): 1329-1332, Zonguldak, Turkey, 16-19 May, 2016.

Ozcan, C., Sen, B., Nar, F., Early-exit Optimization Using Mixed Norm Despeckling for SAR Images, IEEE Signal Processing and Communications Applications Conference (SIU), 2015 23nd, Page(s): 685 - 688, Malatya, Turkey, 16-19 May, 2015.

Ozcan, C., Sen, B., Nar, F., Fast feature preserving despeckling, IEEE Signal Processing and Communications Applications Conference (SIU), 2014 22nd, Page(s): 1007 - 1010, Trabzon, Turkey, 23-25 April, 2014.

Sen, B., Menemencioglu, O., Atasoy, F. and **Ozcan, C.**, Clustered virtual class application, Academic Informatic, Malatya, 1-8, 2011.

E. **Books published in the international publishing houses:**

Karaoglu, A., **Ozcan, C.**, Yapay Zekâ Kuramdan Uygulamaya, Nobel Akademik Yayıncılık, 1. Basım, Editörler: Cakir, H, Uluyol, C., ISBN: 978-625-427-802-0, 2022.

Özcan, C., Durgut, R., Özen, S.O., Özen, S., Deneyap Teknoloji Atölyeleri Yazılım Teknolojileri Ortaokul, TÜBİTAK Bilim ve Toplum Başkanlığı Popüler Bilim Kitapları Genel Yayın Yönetmenliği, Ankara/Türkiye, 2021

Özcan, C., Durgut, R., Özen, S.O., Özen, S., Deneyap Teknoloji Atölyeleri Yazılım Teknolojileri Lise, TÜBİTAK Bilim ve Toplum Başkanlığı Popüler Bilim Kitapları Genel Yayın Yönetmenliği, Ankara/Türkiye, 2021.