Asst. Prof. DUYGU SARIKAYA

Personal Information

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Education Information

Doctorate, State University of New York at Buffalo, Faculty of Engineering, Computer Science and Engineering, United States Of America 2012 - 2017

Postgraduate, State University of New York at Buffalo, Faculty of Engineering, Computer Science and Engineering, United States Of America 2010 - 2012

Undergraduate, Tobb University Of Economics And Technology, Faculty Of Engineering, Department Of Computer Engineering, Turkey 2005 - 2009

Dissertations

Doctorate, Exploring Fusion Models in Computer Vision for Medical Image Computing, State University of New York at Buffalo, Faculty of Engineering, Computer Science and Engineering, 2017

Research Areas

Computer Vision, Artificial Intelligence, Computer Learning and Pattern Recognition

Published journal articles indexed by SCI, SSCI, and AHCI

I. **Surgical data science-from concepts toward clinical translation**
Maier-Hein L., Eisenmann M., SARIKAYA D., Maerz K., Collins T., Malpani A., Fallert J., Feussner H., Giannarou S., Mascagni P., et al.
MEDICAL IMAGE ANALYSIS, vol.76, 2022 (SCI-Expanded)

II. **MIcro-surgical anastomose workflow recognition challenge report**
Huaulmé A., SARIKAYA D., Le Mut K., Despinoy F., Long Y., Dou Q., Chng C., Lin W., Kondo S., Bravo-Sánchez L., et al.
Computer Methods and Programs in Biomedicine, vol.212, 2021 (SCI-Expanded)

III. **SAGES consensus recommendations on an annotation framework for surgical video**
Meireles O. R., Rosman G., Carin L., Hager G., Madani A., Padoy N., Pugh C. M., Sylla P., Ward T. M., Hashimoto D. A., et al.
Surgical Endoscopy And Other Interventional Techniques, vol.35, pp.4918-4929, 2021 (SCI-Expanded)

IV. **Detection and Localization of Robotic Tools in Robot-Assisted Surgery Videos Using Deep Neural Networks for Region Proposal and Detection**
Sarikaya D., Corso J. J., Guru K. A.
IEEE TRANSACTIONS ON MEDICAL IMAGING, vol.36, no.7, pp.1542-1549, 2017 (SCI-Expanded)

V. **The Multimodal Brain Tumor Image Segmentation Benchmark (BRATS)**
Menze B. H., Jakab A., Bauer S., Kalpathy-Cramer J., Farahani K., Kirby J., Burren Y., Porz N., Slotboom J., Wiest R., et al.

IEEE TRANSACTIONS ON MEDICAL IMAGING, vol.34, no.10, pp.1993-2024, 2015 (SCI-Expanded)

VI. **MRBrainS Challenge: Online Evaluation Framework for Brain Image Segmentation in 3T MRI Scans**
Mendrik A. M., Vincken K. L., Kuijf H. J., Breeuwer M., Bouvy W. H., de Bresser J., Alansary A., de Bruijne M., Carass A., El-Baz A., et al.
COMPUTATIONAL INTELLIGENCE AND NEUROSCIENCE, vol.2015, 2015 (SCI-Expanded)

Articles Published in Other Journals

I. **Special issue on 2021 augmented environments for computer-assisted interventions (AE-CAI): guest editors' foreword**
Linte C. A., Chen E., Dou Q., Drouin S., Kersten-Oertel M., McLeod J., Sarikaya D., Yaniv Z.
COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING-IMAGING AND VISUALIZATION, vol.10, no.3, pp.241-242, 2022 (ESCI)

II. **Special issue on 2020 augmented environments for computer-assisted interventions (AE-CAI): guest editors' foreword**
Linte C. A., Chen E., Drouin S., Kersten-Oertel M., Yaniv Z., Hashimoto D., Dou Q., Luo X., McLeod J., SARIKAYA D.
COMPUTER METHODS IN BIOMECHANICS AND BIOMEDICAL ENGINEERING-IMAGING AND VISUALIZATION, vol.9, pp.217-218, 2021 (ESCI)

Refereed Congress / Symposium Publications in Proceedings

I. **Reinforcement Learning Based Cardiac Ultrasound Video Summarization Using Weak Supervision and Proximity Reward Kalp Ultrason Video Özetleme için Yakınlık Ödülü Kullanan Pekiştirmeli Öğrenme ve Zayıf Öğrenme Tabanlı Bir Yaklaşım**
Çoban A., GÜZEL TURHAN C., Sarikaya D.
32nd IEEE Conference on Signal Processing and Communications Applications, SIU 2024, Mersin, Turkey, 15 - 18 May 2024

II. **Generating Automatic Surgical Captions Using a Contrastive Language-Image Pre-Training Model for Nephrectomy Surgery Images Karşılaştırmalı Dil-Görüntü Ön Eğitim Modeli ile Nefrektomi Ameliyatı Görüntülerinde Otomatik Cerrahi Alt Yazıların Oluşturulması**
Kütük S., ÇAĞLIKANTAR T., Sarıkaya D.
32nd IEEE Conference on Signal Processing and Communications Applications, SIU 2024, Mersin, Turkey, 15 - 18 May 2024

III. **Automatic Surgical Caption Generation in Nephrectomy Surgery Videos Nefrektomi Ameliyat Videolarinda Otomatik Cerrahi Altyazi Üretimi**
Kütük S., Bombieri M., Dall'Alba D., Fiorini P., Sarikaya D.
31st IEEE Conference on Signal Processing and Communications Applications, SIU 2023, İstanbul, Turkey, 5 - 08 July 2023

IV. **Using Human Gaze For Surgical Activity Recognition**
Sarıkaya D., Abdillahi Awale A.
IEEE Signal Processing and Communications Applications (SIU), Karabük, Turkey, 15 - 18 May 2022, pp.1-4

V. **An Efficient Polyp Segmentation Network**
Sarıkaya D., Erol T.
IEEE Signal Processing and Communications Applications (SIU), Karabük, Turkey, 15 - 18 May 2022, pp.1-4

VI. **Surgical activity recognition with transformer networks Transformer ağı ile cerrahi hareket tanima**
Kabatas S. N., SARIKAYA D.
29th IEEE Conference on Signal Processing and Communications Applications, SIU 2021, Virtual, Istanbul, Turkey, 9 - 11 June 2021

VII. **Surgical gesture recognition with optical flow only**

Sarıkaya D., Jannin P.

Computer Assisted Radiology and Surgery , Munich, Germany, 23 - 27 June 2020, pp.48-49

VIII. **CARS 2020 Computer Assisted Radiology and Surgery Proceedings of the 34th International Congress and Exhibition, Munich, Germany, June 23, 2020**

Sarıkaya D., Guru K. A., Corso J. J.

Computer Assisted Radiology and Surgery - the 34th International Congress and Exhibition, Munich, Germany, 23 June 2020, pp.47-48

Scientific Refereeing

IEEE TRANSACTIONS ON MEDICAL IMAGING, Journal Indexed in SCI-E, December 2021

IEEE TRANSACTIONS ON MEDICAL IMAGING, Journal Indexed in SCI-E, May 2021

International Journal of Computer Assisted Radiology and Surgery, Journal Indexed in SCI-E, April 2021

Sinyal İşleme ve İletişim Uygulamaları Kurultayı (SIU 2021), Conference Paper (Full Text), April 2021

Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Conference Paper (Full Text), April 2021

Medical Image Computing and Computer Assisted Interventions 2021, Conference Paper (Full Text), April 2021

Medical Image Computing and Computer Assisted Interventions 2021, Conference Paper (Full Text), April 2021

Medical Image Computing and Computer Assisted Interventions 2021, Conference Paper (Full Text), April 2021

IEEE TRANSACTIONS ON MEDICAL IMAGING, Journal Indexed in SCI-E, January 2021

International Conference on Information Processing in Computer- Assisted Interventions, Conference Paper (Full Text), January 2021

IEEE TRANSACTIONS ON MEDICAL IMAGING, Journal Indexed in SCI-E, October 2020

IEEE TRANSACTIONS ON MEDICAL IMAGING, Journal Indexed in SCI-E, September 2020

COMPUTER METHODS AND PROGRAMS IN BIOMEDICINE, Journal Indexed in SCI-E, August 2020

Computer Assisted Surgery, Journal Indexed in ESCI, July 2020

Computer Assisted Surgery , Journal Indexed in ESCI, June 2020

COMPUTER ASSISTED SURGERY, Journal Indexed in ESCI, May 2020

International Conference on Medical Image Computing and Computer Assisted Intervention, Conference Paper (Full Text), April 2020

International Conference on Medical Image Computing and Computer Assisted Intervention, Conference Paper (Full Text), April 2020

International Conference on Medical Image Computing and Computer Assisted Intervention, Conference Paper (Full Text), April 2020

INTERNATIONAL JOURNAL OF COMPUTER ASSISTED RADIOLOGY AND SURGERY, Journal Indexed in SCI-E, March 2020

Tasks In Event Organizations

Sarıkaya D., The joint 15th AE-CAI, 8th CARE and 4th OR 2.0 workshop, MICCAI 2021, Scientific Congress, Strasbourg, France, Eylül 2021

Sarıkaya D., Computer Vision and Augmented Reality in Surgery, Scientific Congress, London, United Kingdom, Temmuz 2021

Sarıkaya D., The joint 14th AE-CAI, 7th CARE and 3rd OR 2.0 workshop, MICCAI 2020, Scientific Congress, Lima, Peru, Ekim 2020

Sarıkaya D., MIcro-Surgical Anastomose Workflow recognition on training sessions (MISAW) Challenge, part of the Endovis Grand Challenge, MICCAI 2020, Scientific Congress, Lima, Peru, Ekim 2020

Sarıkaya D., The second International Workshop on OR 2.0 Context-Aware Operating 'Theaters, MICCAI 2019, Scientific Congress, Shenzhen, China, Ekim 2019

Sarıkaya D., The second International Surgical Data Science Workshop, CARS 2019, Scientific Congress, Rennes, France, Haziran 2019

Sarıkaya D., The First International Workshop on OR 2.0 Context-Aware Operating Theaters, MICCAI 2018, Scientific Congress, Granada, Spain, Eylül 2018

Metrics

Publication: 16
Citation (WoS): 1764
Citation (Scopus): 2864
H-Index (WoS): 4
H-Index (Scopus): 4

Congress and Symposium Activities

BMVC 2021 — British Machine Vision Conference, Audience, Cardiff, United Kingdom, 2021
MICCAI 2021, the 24 . International Conference on Medical Image Computing and Computer Assisted Intervention, Audience, Strasbourg, France, 2021
ToRK Türkiye Robotbilim Konferansı, Audience, İzmir, Turkey, 2021
SIU 2021 - 29. Sinyal İşleme ve İletişim Uygulamaları Kurultayı, Session Moderator, İstanbul, Turkey, 2021
Association for Surgical Education (ASE) 2021 Annual Meeting, Panelists, Illinois, United States Of America, 2021
The Hamlyn Symposium on Medical Robotics 2021, Attendee, London, United Kingdom, 2021
MICCAI 2021, the 23 . International Conference on Medical Image Computing and Computer Assisted Intervention, Audience, Lima, Peru, 2020

Scholarships

Fulbright Grant, Fulbright Program, 2010 - 2012