

Dr. Ufuk Celikkan

Department of Computer Engineering, Hacettepe University,
Beytepe 06800, Ankara, Turkey
phone: +90 (0312) 297 7500 - 131
web: <http://web.cs.hacettepe.edu.tr/~celikkan/>
e-mail: ufuk.celikcan@gmail.com
e-mail: celikkan@hacettepe.edu.tr

EDUCATION

Doctor of Philosophy, Electrical Engineering
University of California, Riverside, USA
PhD Dissertation: *Bimodal Leaky Prediction for Error Resilient Source-Channel Coding and Its Adaptation to Video Coding*
December 2013

Master of Science, Computer Engineering
Bilkent University, Ankara, Turkey
MSc Thesis: *Perceived Disparity Refinement in Interactive Environments*
January 2015

Master of Science, Electrical Engineering
University of California, Riverside, USA
MSc by coursework
December 2010

Bachelor of Science, Electrical & Electronics Engineering
Bogazici University, Istanbul, Turkey
Concentration: *Signal Processing and Communication Systems*
BSc Thesis: *Multimodal TV News Story Segmentation for Turkish Broadcasting*
June 2006

Bachelor of Science, Physics
Bogazici University, Istanbul, Turkey
(via Double-Major Program)
June 2006

RESEARCH INTERESTS

Computer Graphics and Human-Computer Interaction
3D Vision and Stereoscopy, VR/AR/MR, Computer Animation, Human Motion Synthesis and Analysis, Serious Games and Simulations

Computer Vision and Image Processing
Visual Saliency, Visual Tracking, Human Activity Recognition

Video Processing and Video Coding
Joint Source-Channel Coding of Video, Error Resilient Video Coding, Video-Content Analysis and Retrieval

PUBLICATIONS
IN
SCI-INDEXED
JOURNALS

Emre Avan, Tolga K. Capin, Hasmet Gurcay, **Ufuk Celikcan**, 2021. *Enhancing VR Experience with RBF Interpolation Based Dynamic Tuning of Stereoscopic Rendering*. Computers & Graphics (in press).

Onur Can Uner, Cem Aslan, Burak Ercan, Tayfun Ates, **Ufuk Celikcan**, Aykut Erdem, Erkut Erdem, 2021. *Synthetic18K: Learning Better Representations for Person Re-ID and Attribute Recognition from 1.4 Million Synthetic Images*. Signal Processing: Image Communication.

Abdulrahman Kerim, **Ufuk Celikcan**, Erkut Erdem, Aykut Erdem, 2021. *Using Synthetic Data for Person Tracking Under Adverse Weather Conditions*. Image and Vision Computing.

Abdulrahman Kerim, Cem Aslan, **Ufuk Celikcan**, Erkut Erdem, Aykut Erdem, 2021. *NOVA: Rendering Virtual Worlds with Humans*. Computer Graphics Forum.

Mujgan Inozu, **Ufuk Celikcan**, Ezgi Trak, Elif Üzümcü, Hüseyin Nergiz, 2021. *Assessment of virtual reality as an anxiety and disgust provoking tool: The use of VR exposure in individuals with high contamination fear*. Cyberpsychology: Journal of Psychosocial Research on Cyberspace.

Kubra Isgin-Atici, Alper Ozkan, **Ufuk Celikcan**, Gozde Ede, Cem Aslan, Ahmed Samil Bulbul, Zehra Buyuktuncer, Nuray Kanbur, 2020. *Usability Study of a Novel Tool: The Virtual Cafeteria in Nutrition Education*. Journal of Nutrition Education and Behavior.

Ufuk Celikcan, Mehmet Bahadir Askin, Dilara Albayrak, Tolga K Capin, 2020. *Deep into Visual Saliency for Immersive VR Environments Rendered in Real-Time*. Computers & Graphics.

Mujgan Inozu, **Ufuk Celikcan**, Burcin Akin, Nuray Mustafaoğlu Cicek, 2020. *The use of virtual reality (VR) exposure for reducing contamination fear and disgust: Can VR be an effective alternative exposure technique to in vivo?*. Journal of Obsessive-Compulsive and Related Disorders, 25, p.100518.

Berk Cebeci, **Ufuk Celikcan**, Tolga K Capin, 2019. *A comprehensive study of the affective and physiological responses induced by dynamic virtual reality environments*. Computer Animation and Virtual Worlds, 30(3-4), p.e1893.

Ufuk Celikcan, Sami Arpa, Tolga Capin, 2017. *Image reproduction with compensation of luminance adaptation*. Signal, Image and Video Processing, 11(1), pp.155-162.

Ufuk Celikcan, Ilker O Yaz, Tolga Capin, 2015, February. *Example-Based Retargeting of Human Motion to Arbitrary Mesh Models*. In Computer Graphics Forum (Vol. 34, No. 1, pp. 216-227).

Ufuk Celikcan, Gokcen Cimen, E Bengu Kevinc, Tolga Capin, 2013. *Attention-aware disparity control in interactive environments*. The Visual Computer, 29(6-8), pp.685-694.

**PUBLICATIONS
IN
OTHER
JOURNALS**

Uzumcu, E., Akin, B., Nergiz, H., Inozu, M. and Celikcan, U., 2018. *Virtual Reality for Anxiety Disorders/Anksiyete Bozukluklarında Sanal Gerçeklik*. *Psikiyatride Guncel Yaklasimlar/Current Approaches to Psychiatry*, 10(2), pp.99-118.

**CONFERENCE
PUBLICATIONS**

Celikcan, U., 2019, October. *Detection and Mitigation of Cybersickness via EEG-Based Visual Comfort Improvement*. In 2019 3rd International Symposium on Multidisciplinary Studies and Innovative Technologies (ISMSIT) (pp. 1-4). IEEE.

Albayrak, D., Askin, M.B., Capin, T.K. and Celikcan, U., 2019, October. *Visual Saliency Prediction in Dynamic Virtual Reality Environments Experienced with Head-Mounted Displays: An Exploratory Study*. In 2019 International Conference on Cyberworlds (CW) (pp. 61-68). IEEE.

Inozu, M., Celikcan, U., Uzumcu, E., Nergiz, H. and Trak, E., 2019. *Investigating the Role of Virtual Reality as an Anxiety and Disgust Provoking Tool in Contamination Sensitivity*. In XVI European Congress of Psychology (pp. 1160-1160).

Celikcan, U., Bülbül, A.Ş., Aslan, C., Buyuktuncer, Z., Işgın, K., Ede, G. and Kanbur, N., 2018, October. *The Virtual Cafeteria: An Immersive Environment for Interactive Food Portion-Size Education*. In Proceedings of the 3rd International Workshop on Multisensory Approaches to Human-Food Interaction (p. 5). ACM.

Yılmaz, O. and Celikcan, U., 2018, September. *Q-Learning with Naïve Bayes Approach Towards More Engaging Game Agents*. In 2018 International Conference on Artificial Intelligence and Data Processing (IDAP) (pp. 1-6). IEEE.

Kiziltas, D., and Celikcan, U., 2018. *Knee Up: an Exercise Game for Standing Knee Raises by Motion Capture with RGB-D Sensor*. In Proceedings of Smart Tools and Apps for Graphics - Eurographics Italian Chapter Conference. The Eurographics Association.

Bilge, Y.C., Kaya, F., Cinbis, N.İ., Celikcan, U. and Sever, H., 2017, May. *Anomaly detection using improved background subtraction*. In 2017 25th Signal Processing and Communications Applications Conference (SIU) (pp. 1-4). IEEE.

Celikcan, U. and Tuncel, E., 2009, November. *Bimodal leaky prediction for error resilient video streaming*. In 2009 Conference Record of the Forty-Third Asilomar Conference on Signals, Systems and Computers (pp. 583-587). IEEE.

Celikcan, U. and Tuncel, E., 2009, March. *Optimized source-channel coding of video signals in packet loss environments*. In 2009 Data Compression Conference (pp. 437-437). IEEE.

**RESEARCH
FUNDING
RECEIVED AS
PRINCIPAL
INVESTIGATOR**

Project: *Enhancing the User Experience of 3D Displayed Virtual Scenes*
Supported by: The Scientific and Technological Research Council of Turkey (TÜBİTAK)
1001 Program, Grant Number: #116E280 (Grant Total: ~\$134,000)
2017-2019

**RESEARCH
FUNDING
RECEIVED IN
OTHER
CAPACITY**

Project: *The Effect of Cognitive Behavioral Therapy and Virtual Reality Use in Supporting Physical Rehabilitation After Anterior Cruciate Ligament Surgery*
Supported by: TÜBİTAK 1001, Grant Number: #121K248 (Grant Total: in delib-
eration)
Researcher, 2021-2024

Project: *Evaluation of the Effectiveness of Virtual Reality -Based Approach in Hand Hygiene Training Practices*
Supported by: TÜBİTAK 1002, Grant Number: #220S240 (Grant Total: ~\$5,300)
Researcher, 2020-2021

Project: *Using Synthetic Data for Deep Person Re-Identification*
Supported by: TÜBİTAK 1001, Grant Number: #217E029 (Grant Total: ~\$69,000)
Researcher, 2018-2020

Project: *Citywide Smart-Surveillance System through Video Analytics (Video Analizi ile KGYS Akıllı Destek Yazılımları Geliştirilmesi Projesi)*
Supported by: TÜBİTAK-KAMAG 1007, Grant Number: #114G028 (Grant Total: ~\$2,300,000)
Project Consortium: ASELSAN, Hacettepe University, Ozyegin University
Researcher, 2016-2019

Project: *Data-Driven Character Animation*
Supported by: TÜBİTAK 1001, Grant Number: #112E105
Doctoral Student, 2012-2013

Project: *Perceptually-Based 3D Graphics*
Supported by: TÜBİTAK 1001, Grant Number: #110E029
Doctoral Student, 2011-2012

Project: *Low-Delay Communication in Sensor Networks via Prediction- and Transform-Based Distributed Source Coding*
Supported by: U.S. National Science Foundation, Grant Number: #0643695
Doctoral Student, 2007-2011

**ACADEMIC
EXPERIENCE**

Department of Computer Engineering, *Hacettepe University*, Turkey
Assistant Professor
January 2015 - Present

Adjunct Instructor
September, 2014 - January, 2015

Courses Taught:

- Advanced Computer Graphics (post-graduate level)

- Serious Games and Simulations (post-graduate level)
- Game Development with Unity (professional level)
- Mobile Game Development (professional level)
- Introduction to Unreal Engine (professional level)
- Computer Graphics (senior level)
- Game Technologies (senior level)
- Data Structures (sophomore level)
- Logic Design (sophomore level)

Department of Computer Engineering, *Bilkent University*, Turkey
 Research Assistant, Teaching Assistant
 September 2011 - August 2014

Courses Assisted/Taught:

- Principles of User Interface Design (senior level)
- Digital Design (sophomore level)
- Algorithms and Programming (freshman level)
- Introduction to Computing for Engineers (freshman level)
- Introduction to Programming for Engineers (freshman level)

Electrical Engineering Department, *University of California, Riverside*
 Research Assistant, Teaching Assistant
 September 2006 - July 2011

Courses Assisted/Taught:

- Mathematical Methods for Electrical Engineers (graduate level)
- Probability, Random Variables and Processes in Electrical Engineering (junior level)

Signal and Image Processing Laboratory (BUSIM), *Bogazici University*, Turkey
 Undergraduate Research Member in Image and Video Processing Group
 July 2004 - July 2006

LANGUAGES

- Turkish (native)
- English (fluent)
- German (intermediate)
- Japanese (intermediate)

HONORS & AWARDS

- NVIDIA Award towards support of research on GPU Programming and GPGPU, 2015.
- Best Paper Award at Computer Graphics International 2013 for “Attention-Aware Disparity Control in Interactive Environments”, 2013.
- Full Scholarship Award for the graduate studies at Bilkent University, 2011.
- Dean’s Distinguished Fellowship Award for the graduate studies at University of California, Riverside, 2006.
- Graduated 2nd in Electronics and Electrical Engineering & Physics Double Major Program at Bogazici University, 2006.
- Türkiye İş Bankası Award for ranking 33rd among over 1.4 million participants in the Turkish National University Placement Exam, 2001.
- Turkish Ministry of Education Scholarship, 2001.
- Member of the Goethe Institute Award winning team in *Wasserwelten* German-Language Project Competition for Expo 2000, Hannover.
- Ranked 168th among over a million participants in the Turkish National Junior High School Placement Exam, 1994.