

Can Fahrettin Koyuncu

- CONTACT INFORMATION Bilkent University, Computer Engineering Department, EA425
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koyuncu@cs.bilkent.edu.tr
- RESEARCH INTERESTS Medical image analysis, image processing, pattern recognition, machine learning
- EDUCATION **Bilkent University**, Ankara, Turkey
- Ph.D., Computer Engineering Department, Sep. 2012 to present
- Topic: *Automated cell analysis in microscopic images*
 - Area of Study: Medical image analysis, image processing, microscopy imaging
 - Advisor: Cigdem Gunduz Demir, Ph.D.
- M.S., Computer Engineering Department, Sep. 2010 to Aug. 2012
- Topic: *Smart markers for watershed-based cell segmentation*
 - Area of Study: Medical image analysis, image processing, microscopy imaging
 - Advisor: Cigdem Gunduz Demir, Ph.D.
 - Participated as a researcher in a project called "**Intelligent system design for automated classification and indexing of cell deaths in cancerous cell cultures and image based anticancer drug screening method development**" funded by The Scientific and Technological Research Council of Turkey
- TOBB University of Economics and Technology**, Ankara, Turkey
- B.S., Computer Engineering Department, Sep. 2005 to Aug. 2010
- Senior Project: *An automated image tagger for documents on the web*
 - Area of Study: Computer vision, artificial intelligence
 - Advisor: Tansel Ozyer, Ph.D.
- PUBLICATIONS
- **C.F. Koyuncu**, E. Akhan, T. Ersahin, R. Cetin-Atalay, and C. Gunduz-Demir, "Iterative h-minima based marker-controlled watershed for cell nucleus segmentation," *Cytometry: Part A*, in press.
 - T. Gultekin, **C. F. Koyuncu**, C. Sokmensuer, and C. Gunduz-Demir, "Two-tier tissue decomposition for histopathological image representation and classification," *IEEE Transactions on Medical Imaging*, 34(1):275-283, 2015.
 - S. Krappe, C. Mnzenmayer, A. Evert, **C.F. Koyuncu**, E. Cetin, T. Haferlach, T. Wittenberg, C. Held, "Dynamic programming for the segmentation of bone marrow cells," *Bildverarbeitung fr die Medizin*, 359-364, 2015.
 - **C.F. Koyuncu**, I. Durmaz, R. Cetin-Atalay, and C. Gunduz-Demir, "A supervised learning model for live cell segmentation," *IEEE 22nd Signal Processing, Communication, and Applications Conference*, Trabzon, Turkey, Apr 2014.
 - **C.F. Koyuncu**, S. Arslan, I. Durmaz, R. Cetin-Atalay, and C. Gunduz-Demir, "Smart markers for watershed-based cell segmentation," *PLoS ONE*, 7(11):e48664, 2012.
 - **C.F. Koyuncu**, E. Akhan, T. Ersahin, R. Cetin-Atalay, and C. Gunduz-Demir, "Iterative H-minima Based Marker-Controlled Watershed for Cell Nucleus Segmentation: Supplementary Material," BU-CE-1501, 2015 (technical report).

- AWARDS
- Graduate scholarship for PhD students, The Scientific and Technological Research Council of Turkey
 - Graduate scholarship for MSc students, The Scientific and Technological Research Council of Turkey
 - College graduate of high honor, TOBB University of Economics and Technology
 - High honor scholarship by TOBB University of Economics and Technology upon success in University Entrance Exams (1461st rank among nearly 1,500,000 high school graduates)
 - Full scholarship by Sema College upon success in High School Entrance Exam (1512nd rank among nearly 900,000 students)

RESEARCH EXPERIENCE

Visiting Scientist Aug. 2014 to Oct. 2014
Fraunhofer IIS, Erlangen Area, Germany
Advisor: Thomas Wittenberg, PD Dr.
Development of novel algorithms for superpixel based approach for bone marrow segmentation.

Research Assistant Sep. 2010 to present
Computer Engineering Department, Bilkent University
Advisor: Cigdem Gunduz Demir, Ph.D.
Development of novel algorithms for medical image analysis with the help of image processing and machine learning techniques.

TEACHING EXPERIENCE

Teaching Assistant Sep. 2010 to present
Computer Engineering Department, Bilkent University
Responsibilities include preparing assignments and quizzes, meeting with students during weekly office hours, and grading homework and programming assignments.

- Artificial Intelligence
- Fundamental Structures of Computer Science I - II
- Algorithms and Programming I - II

PROFESSIONAL EXPERIENCE

- Software Department in Havelsan, Ankara, Turkey
4 months, intern, (2009 - 2010)
- Information Technology Department, TOBB University, Ankara, Turkey
4 months, intern, (2008 - 2009)
- Software Department, Datasel Bilgi Sistemleri A.S., Ankara, Turkey
4 months, intern, (2007 - 2008)

REFERENCES

Cigdem Gunduz Demir, Associate Professor
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Rengul Cetin Atalay, Associate Professor
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