

ANDAÇ HAMAMCI, PH.D.

PERSONAL INFORMATION

ADDRESS Biomedical Eng. Dept., Faculty of Engineering, Yeditepe University
26 Agustos Yerlesimi, Kayisdagi Cad. 34755 Atasehir, Istanbul/Turkey
PHONE +90 216 578 0000 / 3210 , +90 532 764 5914
EMAIL andac.hamamci@yeditepe.edu.tr

RESEARCH INTERESTS

MEDICAL IMAGE ANALYSIS Tumor Segmentation, Registration, Deformations, Biomechanics, Treatment Follow-up.
MAGNETIC RESONANCE IMAGING Diffusion MRI, Functional MRI, Resting-state fMRI, fMRI Retinotopy.
IMAGE GUIDED THERAPIES Image Guided Radiotherapy Planning, Multimodal Localization in Neurosurgery.

CURRENT EMPLOYMENT

01/2015–PRESENT ASSISTANT PROFESSOR
Biomedical Engineering Dept.
Faculty of Engineering
Yeditepe University (<http://www.yeditepe.edu.tr>)
26 Agustos Yerlesimi, Kayisdagi Cad. 34755 Atasehir, Istanbul/Turkey

EDUCATION

2009–2013 PH.D. IN ELECTRONICS ENGINEERING
SABANCI UNIVERSITY, ISTANBUL, TURKEY
Thesis: Image Analysis Methods for Brain Tumor Treatment Follow-up
Supervisor: Assoc.Dr.Gozde Unal
2002–2006 M.S. IN BIOMEDICAL ENGINEERING
BOGAZICI UNIVERSITY, ISTANBUL, TURKEY
Thesis: Effects of Repetitive Retinotopic Stimulus on Visual Cortex fMRI Signal
Supervisor: Prof.Dr.Cengizhan Ozturk
1997–2002 B.S. IN PHYSICS
BOGAZICI UNIVERSITY, ISTANBUL, TURKEY

PROFESSIONAL EXPERIENCE

01/2015– YEDITEPE UNIVERSITY, BIOMEDICAL ENG. DEPT., ISTANBUL
Assistant Professor
06/2013–12/2014 I.R.C.C.S. SANTA LUCIA FOUNDATION, RADIOLOGY DEPT., ROME, ITALY
Marie Curie Experienced Researcher
02/2012–01/2013 YEDITEPE UNIVERSITY, BIOMEDICAL ENG.DEPT., ISTANBUL
Part-time Instructor
02/2009–05/2013 SABANCI UNIVERSITY, ISTANBUL
Teaching and Research Assistant
04/2007–08/2008 GENERAL ELECTRIC, MARMARA TECH. CENTER, GEBZE, KOCAELI
Software Engineer
08/2005–04/2006 YEDITEPE UNIVERSITY HOSPITAL, RADIOLOGY DEPT., ISTANBUL
Researcher
03/2004–08/2004 HARVARD MEDICAL SCHOOL, MASSACHUSETTS GENERAL HOSPITAL, NMR CENTER, BOSTON, USA
Visiting Researcher
10/2002–01/2005 BOGAZICI UNIVERSITY, ISTANBUL
Research Assistant

PUBLICATIONS

JOURNAL PAPERS

A.Hamamci, N.Kucuk, K.Karaman, K.Engin, G.Unal. *Tumor-Cut: Segmentation of Brain Tumors on Contrast Enhanced MR Images for Radiosurgery Applications*. IEEE Transactions on Medical Imaging, 31(3): p790-804, 2012.

S.Oflaz, F.Akyuz, **A.Hamamci**, Z.Firat, C.Keskinilic, O.Kilickesmez, M.Cihangiroglu. *Working Memory Dysfunction in Delusional Disorders: An fMRI Investigation*. Journal of Psychiatric Research, 56: 43-9, 2014.

B.H.Menze, et al. *The Multimodal Brain Tumor Image Segmentation Benchmark (BRATS)*. IEEE Transactions on Medical Imaging, <http://dx.doi.org/10.1109/TMI.2014.2377694>, 2014. (in press)

G.Karlikaya, **A.Hamamci**, N.Neyzi, N.Afsar, M.Cihangiroglu, O.Tanridag, C.A.Bingol, I.Kovanlikaya. *Functional MRI in Determining Language Lateralization (in Turkish)*. Turkish Journal of Neurology, 13-1(27-32), 2007.

A.Hamamci, G.Unal. *Registration of Brain Tumor Images Using Hyper-Elastic Regularization*. (in preparation).

BOOK CHAPTERS

A.Hamamci, G.Unal. *Registration of Brain Tumor Images Using Hyper-Elastic Regularization*. Computational Biomechanics for Medicine, pp 101-114, Springer, 2013.

A.Hamamci, G.Unal, N.Kucuk, K.Engin. *Cellular Automata Segmentation of Brain Tumors on Post Contrast MR Images*. MICCAI 2010, Lecture Notes in Computer Science, Volume 6363/2010, p137-146, Springer, 2010.

CONFERENCES

N.P.Tuovinen, **A.Hamamci**, F.de Pasquale, U.Sabatini. *Identification of regions at risk for radiotherapy planning based on fMRI data*. Radiother Oncol (ESTRO'14), 111(S1): 674, April 2014.

N.P.Tuovinen, **A.Hamamci**, F.de Pasquale, U.Sabatini. *Postoperative Brain Tumor Resting State and Task fMRI Study for Radiotherapy Planning*. Joint Annual Meeting ISMRM-ESMRMB, Milan, Italy, May 2014.

N.P.Tuovinen, **A.Hamamci**, F.de Pasquale, A.Laprie, U.Sabatini. *Resting-state network plasticity in the presence of brain tumors*. 20th Meeting of Organization for Human Brain Mapping (OHBM'14), 3186, 2014.

B.Aygen, Z.Firat, G.H.Hatay, **A.Hamamci**, E.Ozturk Isik. *Resting State fMRI Data Analysis Using Group ICA (in Turkish)*. 19th Turkish MR Society Conference, Ankara, May 2014.

C.Ceylan, **A. Hamamci**, N. Kucuk, K. Karaman, A. H. Kaya, G. Unal, K. Engin. *Assessment of Response to Therapy using Necrotic Volume measurements for Acoustic Neuroma Cases that underwent Radiosurgery (in Turkish)*. 14th National Medical Physics Conference, Antalya, Turkey, 2013.

A.Hamamci, M.S.Can, G.Unal. *Functionally Weighted Track Density Imaging (in Turkish)*. 21st Signal Processing and Communications Applications Conference, Cyprus, 2013.

N.C.Askin, Z.Firat, **A.Hamamci**, B.Bilir, U.Ture, E.Ozturk-Isik. *Analyzing The Activation Points of Hand Movement of Patients Diagnosed With Brain Tumors by Functional Magnetic Resonance Imaging Using SPM (in Turkish)*. Turkish MR Society Conference, Ankara, Turkey, 2012.

A.Hamamci, G.Unal. *Multimodal Brain Tumor Segmentation Using The 'Tumor-cut' Method on The BraTS Dataset* MICCAI 2012-Multimodal Brain Tumor Segmentation Challenge, Nice, France, 2012.

A.Hamamci, N.Kucuk, K.Karaman, K.Engin, G.Unal. *Quantification of Tumor Responses to Radiosurgery using Tensor Invariants* ESMRMB'12 - European Society for Magnetic Resonance in Medicine and Biology Congress, Lisbon, Portugal, 2012.

A.Hamamci, G.Unal, N.Kucuk, K.Karaman, K.Engin. *Cellular Automata Based Brain Tumor Segmentation System and Radiosurgery Applications (In Turkish)*. Turkish MR Society Conference, Istanbul, 2011.

S.Basyigit, S.Oflaz, **A.Hamamci**, M.E.Ceylan, K.Aydin. *Neuroimaging of the ability of face recognition and emotion recognition of schizophrenic patients and their children*, 24th Congress Meeting of European-College-of-Neuropsychopharmacology, Paris, European Coll Neuropsychopharmacol, 21(3):p519-520, 2011.

F.Akyuz, S.Oflaz, **A.Hamamci**, Z.Firat, M.Cihangiroglu. *Continuous performance test dysfunction in delusional disorder: an fMRI investigation*. 23rd Congress Meeting of European-College-of-Neuropsychopharmacology, Amsterdam, Netherlands, 2010.

M.Yorulmaz, E.Karahan, **A.Hamamci**, C.Ozturk. *Mapping of the visual cortex: A Freesurfer-based approach*. 15th National Biomedical Engineering Meeting (BIYOMUT), Antalya, Turkey, 2010.

A.Hamamci, G.Unal, K.Karaman, K.K.Oguz. *Semi-automatic analysis of tumor changes in response to therapy*. ESMRMB'09- European Society for Magnetic Resonance in Medicine and Biology Congress, Antalya, Turkey, 2009.

G.Karlikaya, B.Citci, I.Kovanlikaya, B.Guclu, **A.Hamamci**, U.Ture, C.A.Bingol. *Rasmussen's Encephalitis*. 17th Meeting of the European-Neurological Society, Rhodes, Greece, 2007.

B.G.Jenkins, J.K.Choi, **A.Hamamci**, J.B.Mandeville, B.R.Rosen, Y.C.I.Chen. *Modeling Dopamine Dynamics Using Combined Microdialysis and MRI Measurements*. Joint Annual Meeting ISMRM-ESMRMB, 2007.

A.Hamamci, U.E.Emir. *Mapping the Visual Cortex Areas by FMRI Method*. III. Advanced Imaging Symposium, Istanbul, 2006.

G.Karlikaya, **A.Hamamci**, N.Neyzi, N.Afsar, M.Cihangiroglu, O.Tanridag, C.A.Bingol, I.Kovanlikaya. *Functional MRI in Determining Language Lateralization (in Turkish)*. 41st National Neurology Conference, Istanbul, 2005.

U.E.Emir, **A.Hamamci**, O.Okur, C.Ozturk. *Diffusion Tensor MRI Technique and Sequence Design (in Turkish)*. Neuro-science Conference, Mersin, 2005.

U.Cardak, **A.Hamamci**, M.L.Kurnaz. *The effect of the Third Dimension on the Roughness of Surfaces Formed by Sedimenting Particles in Quasi-Two-Dimensions*. 9th Statistical Physics Days, Istanbul, Turkey, 2002.

DISSERTATIONS

A.Hamamci. *Image Analysis Methods for Brain Tumor Treatment Follow-up*. Ph.D. Thesis, Sabanci University, 2013.

A.Hamamci. *Effects of Repetitive Retinotopic Stimulus on Visual Cortex fMRI Signal*. M.S.Thesis, Bogazici University, 2006.

OTHER

TEACHING

Assist. Prof. at Yeditepe University (*Medical Imaging, Biomedical Electronics I, Electromagnetic Fields and Waves*).

Instructor at Yeditepe University (*Biomedical Electronics I, Biological and Medical Physics*).

Teaching Assistant at Sabanci University (*Calculus I, Calculus II, Introduction to Signal Processing*).

AWARDS

"Tumor-cut" was awarded as one of the best performing algorithms in *Multimodal Brain Tumor Segmentation Challenge (BraTS)* MICCAI, Nice, France, 2012.

Ranked in the first 15 students nationwide in *National High School Physics Olympics* by National Research Council of Turkey (TUBITAK), 1995.

REVIEWING SERVICES

Applied Soft Computing, Elsevier. IEEE Transactions on Medical Imaging. IEEE Transactions on Information Technology in Biomedicine. MICCAI Conferences. Turkish Journal of Electrical Engineering and Computer Sciences.

LANGUAGES

Turkish (native), English (fluent), German (fair), Italian (fair).