

# Murat Aksoy

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| <b>Education</b>         | <p>06/2005 – ~ <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• Ph.D., Electrical Engineering, GPA 4.00/4.00</li><li>• Magnetic Resonance Imaging Specialization</li></ul> <p>09/2003 – 06/2005 <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• M.S., Electrical Engineering, GPA 3.98/4.00</li><li>• Medical Imaging Specialization</li></ul> <p>09/1999 – 07/2003 <b>Bogazici University</b> Istanbul, Turkey</p> <ul style="list-style-type: none"><li>• B.S., Electrical and Electronics Engineering, GPA 3.83/4.00</li><li>• 3rd rank in department among 70, 5th rank in faculty among 367 students</li></ul>   |
| <b>Academic Research</b> | <p>Spring 2006 <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• Took part in the implementation and testing of a tool for “Detection of Visual Code Markers” as a part of the “Digital Image Processing” course</li></ul> <p>Fall 2006 <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• Implemented and tested an algorithm for “GRAPPA Reconstruction for Radial and Spiral Trajectories” as a part of the “Medical Image Reconstruction” course</li></ul> <p>June 2005 ~ <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• Worked with Roland Bammer on the development of a novel SENSE-based rigid body motion correction algorithm.</li><li>• Implemented and tested a Non-Linear Conjugate Gradient based motion correction algorithm for DTI.</li></ul> <p>Spring 2004 - June 2005 <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• Worked with Roland Bammer as the primary advisor and Michael E. Moseley and John Pauly as co-advisors on the development of a Graphical User Interface for DTI-based Fiber Tractography</li><li>• Implemented Euler’s Method, 4<sup>th</sup> order Runge Kutta Method and Fast Marching techniques for Fiber Tracking</li><li>• Worked on the development of metrics for measuring SNR dependence of Fiber Tracking Protocols.</li><li>• Implemented a query-based ROI analysis tool to be used in Fiber Tractography</li></ul> <p>Autumn 2005 <b>Stanford University</b> Stanford, CA</p> <ul style="list-style-type: none"><li>• Designed, implemented and simulated a pulse sequence as a part of the project “Velocity and Slice Selective RF Pulse Design” in EE469a – RF Pulse Design for Magnetic Resonance Imaging course.</li></ul> <p>Spring 2003 <b>Bogazici University</b> Istanbul, Turkey</p> <ul style="list-style-type: none"><li>• Worked on “Signal Adaptive PR-QMF Wavelet Filter Design Using Alternating Projections” for the BS thesis based on the paper entitled “Wavelet Synthesis by Alternating Projections”, Pesquet, J.-C.; Combettes, P.L.</li></ul> <p>Fall 2003 <b>Bogazici University</b> Istanbul, Turkey</p> <ul style="list-style-type: none"><li>• Wrote a software for face detection using template matching methodology for Image Processing course</li></ul> <p>Fall 2003 <b>Bogazici University</b> Istanbul, Turkey</p> |

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|                                | <ul style="list-style-type: none"> <li>Implemented a program for human gesture recognition based on template matching in Java</li> </ul>  |
| <b>Related Experience</b>      | <ul style="list-style-type: none"> <li>Analysis and Post Processing of Magnetic Resonance Image Data</li> <li>Digital Image Processing Methods</li> <li>Fourier and Fast Fourier Transforms</li> <li>Signal Processing</li> </ul>   |
| <b>Related Coursework</b>      | <ul style="list-style-type: none"> <li>Medical Image Reconstruction</li> <li>Medical Imaging Systems I - X-Ray, CT, Nuclear Medicine</li> <li>Medical Imaging Systems II - Ultrasound, MRI</li> <li>RF Pulse Design for Magnetic Resonance Imaging</li> <li>Introduction to Imaging and Image-based Human Anatomy</li> <li>Image Processing, Advanced Image Processing</li> <li>Fourier Transform and its Applications</li> <li>Applications of the Fast Fourier Transform</li> <li>Digital Filtering</li> </ul>  |
| <b>Journal Publications</b>    | <ul style="list-style-type: none"> <li>R Bammer, M Aksoy, C Liu , "Augmented generalized SENSE reconstruction to correct for rigid body motion", Magnetic Resonance in Medicine, Volume 57, Issue 1 , Pages 90 - 102</li> <li>R Bammer, T Hope, M Aksoy, MT Alley , "Time-resolved 3D quantitative flow MRI of the major intracranial vessels: Initial experience and comparative evaluation at 1.5T and 3.0T in combination with parallel imaging", Volume 57, Issue 1 , Pages 127 - 140</li> </ul>  |
| <b>Conference Publications</b> | <ul style="list-style-type: none"> <li>M Aksoy, C Liu, M Moseley, R Bammer "The effect of Navigator Resolution on Registration Accuracy in Rigid Head Motion Correction", Joint Annual Meeting of ISMRM-ESMRMB in Berlin, Germany, May 2007</li> <li>M Aksoy, C Liu, R Bammer "Tensor Estimation for DTI Using Non-Linear Conjugate Gradient", Joint Annual Meeting of ISMRM-ESMRMB in Berlin, Germany, May 2007</li> <li>M Aksoy, C Liu, R Bammer "Rigid Head Motion Correction for DTI Using Non-Linear Conjugate Gradient", Joint Annual Meeting of ISMRM-ESMRMB in Berlin, Germany, May 2007</li> <li>R Bammer, C Liu, M Aksoy, "Improving Rigid Head Motion Correction Using Parallel Imaging" ISMRM 14th Scientific Meeting in Seattle, Washington, USA, May 2006</li> <li>M Aksoy, C Liu, ME Moseley, R Bammer, "A Self-navigated Spiral In &amp; Out Pulse Sequence Design for Retrospective Motion Correction", ISMRM 14th Scientific Meeting in Seattle, Washington, USA, May 2006</li> <li>M Aksoy, R Bammer, MA Lansberg, T Hope, ME Moseley, RJ Herfkens, MT Alley, "Streamline and Particle Trace Visualization of Major Intracranial Vessels Using 3D Time Resolved MRA", ESMRMB 2005 22nd Annual Scientific Meeting, September 15 - 18, 2005, Basle, Switzerland</li> <li>R Bammer, M Aksoy, MA Lansberg, T Hope, ME Moseley, RJ Herfkens, MT Alley, "Time-Resolved 3D Quantitative Flow MRI of the Major Intracranial Arteries" ISMRM 13th Scientific Meeting &amp; Exhibition, Florida, USA, May 2005</li> <li>M Aksoy, B Acar, R Bammer, "SNR Dependence of DTI Fiber Tracking Protocols", ISMRM Workshop on Methods for Quantitative Diffusion MRI of Human Brain, Alberta, Canada, March 2005</li> </ul> |
| <b>Book Chapters</b>           | <ul style="list-style-type: none"> <li>R Bammer, C Liu, M Aksoy. (2007). Parallel Imaging Reconstruction of Arbitrary k-space Sampling Data. Ed. S.O.Schoenberg, O. Dietrich, M.F.Reiser. <i>Parallel Imaging in Clinical MR Applications</i>. (pp. 71-90). Berlin:Springer</li> </ul>  |

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| <b>Work Experience</b>         | <p>07/2002 – 09/2002      <b>Turkcell Wireless</b>      Istanbul, Turkey<br/>Intern – Software Development</p> <ul style="list-style-type: none"> <li>• Developed a graphical interface for displaying GSM traffic over base stations using Java</li> <li>• Designed and implemented a gaming application in Java to be deployed on cellular phones</li> </ul> <p>06/2002 – 07/2003      <b>NETAS / Nortel Networks</b> Istanbul, Turkey<br/>Intern – Software Testing</p> <ul style="list-style-type: none"> <li>• Performed the testing of Synchronous Digital Hierarchy software, an optical fiber communication protocol</li> </ul> |
| <b>Awards &amp; Honors</b>     | <ul style="list-style-type: none"> <li>• Received the “Best Poster Award” in the “Pulse Sequences, Reconstruction and Analysis” category with the project on "The effect of Navigator Resolution on Registration Accuracy in Rigid Head Motion Correction", in Joint Annual Meeting of ISMRM-ESMRMB in Berlin, Germany, May 2007</li> <li>• Awarded full scholarship by Turkish Education Foundation for graduate studies at Stanford</li> <li>• National University Entrance Exam - ranked in top 0.01% percentile among 1.5 million students</li> </ul>   |
| <b>Computer Skills</b>         | <ul style="list-style-type: none"> <li>• Programming Languages: C/C++, Java</li> <li>• Tools: MFC, VTK, IDL, MATLAB, MS Office, PSPICE, ClearCase</li> </ul>  |
| <b>Languages</b>               | <ul style="list-style-type: none"> <li>• Turkish (native), English (fluent), French (beginner)</li> </ul>   |
| <b>Hobbies &amp; Interests</b> | <ul style="list-style-type: none"> <li>• Soccer, Tennis, Snowboarding, FRP</li> </ul>   |