C.V.

Name:	**Ofer Pasternak**
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Date and place of birth:	Israel, March 12, 1977
Marital status:	Married + 1

RESEARCH AREA:

Diffusion imaging of complex human brain architecture
using algorithms based on image processing techniques and diffusion modeling.

EDUCATION:

Oct 2004 — Ph.D. student, Computer Science, Tel-Aviv University
Topic of approved research proposal: Beltrami flow diffusion imaging - Diffusion models for complex human tissue architecture
Name of Supervisors: Nathan Interator, Nir Sochen and Yaniv Assaf

2002- 2004 — M.Sc Summa Cum Laude in Computer Science, Tel-Aviv University
Title of M.Sc. thesis: Producing Smoothed Vector Field of Multiple Fiber Orientations from Diffusion Weighted Magnetic Resonance Images
Name of Supervisor: Nir Sochen

1999- 2003 — Interdisciplinary Program for Outstanding Students, Tel-Aviv University.

WORK EXPERIENCE:

2005- 2008 — Teaching assistant and lecturer, Tel-Aviv University

2005- 2008 — Guest researcher (three periods) in Prof. Peter Basser's lab, NICHD/NIH, Bethesda, MD.

2005- 2007 — Brain imaging related applications programmer – The Human Brain Mapping Unit, Tel-Aviv Sourasky Medical Center. (for Dr. Talma Hendler)

2004- 2008 — MR related applications programmer – School of Chemistry, Tel-Aviv University (for Prof. Gil Navon and Prof. Yoram Cohen).

2003- 2008 — MRI technician, The Human Brain Mapping Unit, Tel-Aviv Sourasky Medical Center.

2003 — Research assistant, School of mathematical sciences, Tel-Aviv University. (for Dr. Nir Sochen)

AWARDS AND SCHOLARSHIPS:

2004- 2008 — Edersheim- Levi–Gitter scholarship, Functional Human Brain Mapping Unit, Sourasky medical center and Tel-Aviv University.

2004/5/8	International Society for Magnetic Resonance in Medicine student travel award.
2004/7/8	The Deutsch travel award
2008	First prize in CS/IAP poster competition, Tel Aviv University.
2008	The Constantiner Travel Scholarship
2007	The Adams Super Center for Brain Research Travel award.
2006	The Adams Super Center for Brain Research Students' Award Competition for the Best Publication of the Year in Neuroscience.
2002- 2004	The Adams Super Center for Brain Studies Scholarship.
2004	School of computer sciences award for MSc. Students.
1999- 2003	The Adi Lautman Scholarship of the Tel Aviv University interdisciplinary program for outstanding students

LIST OF PUBLICATIONS

- **Journal Papers**

Variational Multiple-Tensors Fitting of Fiber-Ambiguous DW-MRI Voxels
O. Pasternak, N. Sochen, N. Intrator, Y. Assaf, *MRI*. 2008 (E-pub ahead of print)

Diffusion Tensor Imaging of the Median Nerve in Healthy and Carpal Tunnel Syndrome Subjects.
D. Stein, A. Neufeld, **O. Pasternak**. M. Graif, H. Patish., E. Schwimmer, E. Ziv, Y. Assaf, *JMRI* (accepted)

Diffusion Tensor Imaging (DTI)-based White Matter Mapping in Brain Research: A Review.
Y. Assaf, **O. Pasternak,** *J Mol Neurosci.* 34(1):51-61, 2008.

Characterization of Displaced White Matter by Brain Tumors using Combined DTI and fMRI,
T. Schonberg, P. Pianka, T. Hendler, **O. Pasternak**, Y. Assaf. *Neuroimage*, 30:1100-1111, 2006.

- **Book Chapters**

PDE Based Estimation and Regularization of Multiple Diffusion Tensor Fields
O. Pasternak, N. Sochen, Y. Assaf,
in *"Visualization and Image Processing of Tensor Fields"*, Eds. J. Weickert, H. Hagen. Springer, Berlin, 2006.

- **Peer Reviewed Conference Papers**

On What Manifold do Diffusion Tensors Live?
O. Pasternak, R. Verma, N. Sochen, P.J. Basser
Manifold Learning in Medical Imaging workshop at MICCAI, New-York (accepted)

Mapping Neuronal Fibers Through Partial Volume Voxels
O. Pasternak, N. Sochen, N. Intrator, Y. Assaf
*Proceedings of the 14th meeting of the Organisation for Human Brain Mapping **(HBM)***, Melbourne, Australia, 2008**.**

Localization of Cognitive Function in Rats- MRI Study
T. Blumenfeld-Katzir, **O. Pasternak**, Y. Assaf
*Proceedings of the 14th meeting of the Organisation for Human Brain Mapping **(HBM)***, Melbourne, Australia, 2008**.**

Free water extraction from Diffusion Images
O. Pasternak, N. Sochen, N. Intrator, Y. Assaf
*Proceeding of the 16th International Society for Magnetic Resonance in Medicine meeting **(ISMRM)***, Toronto, Canada, 2008

From tractography to graph tracking
O. Pasternak, S. Lifshitz, Y. Assaf
*Proceeding of the 15th International Society for Magnetic Resonance in Medicine meeting **(ISMRM)***, Berlin, Germany, **2007**

Characterization of age induced brain changes using MRI in rats
T. Blumenfeld-Katzir, **O. Pasternak**, Y. Assaf
*Proceeding of the 15th International Society for Magnetic Resonance in Medicine meeting **(ISMRM)***, Berlin, Germany, **2007**

Variational framework for the separation of partially volumed tensor compartments in the human brain
O. Pasternak, N. Sochen, N. Intrator, Y. Assaf
*Proceeding of the 15th International Society for Magnetic Resonance in Medicine meeting **(ISMRM)***, Berlin, Germany, 2007

Age related cognitive decline and regional brain changes studies by dffusion MRI
E. Sasson, G.M. Doniger, **O. Pasternak**, Y. assaf
*Proceeding of the 15th International Society for Magnetic Resonance in Medicine meeting **(ISMRM)***, Berlin, Germany, 2007

Neuronal fiber delineation in area of edema from diffusion weighted MRI
O. Pasternak, N. Sochen, N. Intrator, Y. Assaf.
*Proceeding of The Nineteenth Annual Conference on Neural Information Processing Systems (**NIPS**)*, Vancouver, Cananda. 2005

DT-MRI partial volume effects reduction using the multiple tensor variational framework,
O. Pasternak, N. Sochen, Y. Assaf.
Eight Israeli Symposium on Computer-Aided Surgery, Medical Robotics, and Medical Imaging ***(ISRACAS)***, Rabin Medical Center,Petach Tikva, Israel, 2005.

CSF partial volume reduction in hydrocephalus using a variational framework,
O. Pasternak, N. Sochen, Y.Assaf.
Proceeding of the 13th International Society for Magnetic Resonance in Medicine meeting ***(ISMRM)***, Miami, USA. 2005

Can CSF and edema contamination be removed from 6 directions DTI?
O. Pasternak, N. Sochen, Y. Assaf.
International Society for Magnetic Resonance in Medicine Workshop on methods for quantitative diffusion MRI of human brain. Alberta, Canada. 2005.

FMRI driven seed ROI choosing Procedure for DTI based fiber tractography in the presence of space occupying lesions
T. Schonberg, T. Hendler, P. Pianka, F. Andelman, **O. Pasternak**, M. Sigal, Y. Assaf
Proceedings of the 10th meeting of the Organisation for Human Brain Mapping ***(HBM)***, Budapest, Hungary, 2004**.**

Separation of white matter fascicles from diffusion MRI using $\tilde{\Phi}$-functional regularization
O. Pasternak, N. Sochen, Y. Assaf.
Proceeding of the 12th International Society for Magnetic Resonance in Medicine meeting ***(ISMRM)***, Kyoto, Japan. 2004; 12:1227