**Nikola Stikov**
**e-mail: nikola.stikov@mcgill.ca**
**website: http://www.bic.mni.mcgill.ca/PersonalStikovnikola**

Local Address:
3555 Rue Berri Apt 910
Montreal, H2L 4G4, Canada

Permanent Address:
bul. "J. Sandanski" 11-II/22
1000 Skopje, Macedonia

**EDUCATION:**

| | |
|---|---|
| **9/03 – 9/09** | **Stanford University,** PhD in Electrical Engineering. Advisor: John Pauly. Developed novel methods for quantitative magnetic resonance imaging of myelin and cartilage. Thesis: Quantitative Magnetic Resonance Imaging of the Macromolecular Proton Pool in Tissue |
| **6/01 - 6/03** | **Stanford University,** M.S. in Electrical Engineering. Concentration: Communication Systems. Coursework: Convex Optimization, Communications, DSP and Information Theory. (GPA 3.9/4.0) |
| **9/97 - 6/01** | **Stanford University**, B.S. with Distinction in Electrical Engineering. Specialty: Signal Processing. (GPA 3.9/4.0) |
| **9/00 - 12/00** | **Stanford in Berlin**, Berlin, Germany. Spent an academic quarter in Berlin studying German culture, art and history. |

**EXPERIENCE:**

| | |
|---|---|
| **7/10 – present** | **Postdoctoral Fellow**, McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University.<br>Developing a quantitative MRI methodology for measuring the myelin thickness (g-ratio) *in vivo* |
| **3/04 – 9/09** | **Research Assistant**, Magnetic Resonance Systems Research Lab, Department of Electrical Engineering, Stanford University.<br>Developed novel sequences for quantitative magnetic resonance imaging of cartilage in the human knee and myelin in the human brain |
| **9/06 – 9/08** | **TA Coordinator**, Department of Electrical Engineering, Stanford University. Trained and supervised the work of EE Teaching Assistants. Held teaching workshops and acted as the department's liaison with the Stanford Center for Teaching and Learning |
| **9/01 – 9/08** | **Graduate Student Advisor**, Department of Electrical Engineering, Stanford University. Gave academic advice to current and prospective graduate students, served as the graduate student representative in the EE Academic Affairs Committee, and maintained the EE class management system. |
| **6/06 - 8/06** | **Teaching Fellow**, Stanford University. Taught a course on the Fourier transform and its applications to Stanford engineering graduate students. |

| | |
|---|---|
| **4/05 - 7/05** | **Teaching Fellow,** Stanford Center for Technical Innovation, Kyoto, Japan**.** Taught two EE courses (introductory electronics and computer architecture) to Stanford undergraduates studying at the SCTI, Kyoto. |
| **4/01 - 3/04** | **Teaching Assistant**, Stanford University. Worked as a TA for seven different EE courses, ranging from introductory undergraduate lab courses, to graduate courses in signal processing, communications and linear systems. |
| **9/99 - 3/01** | **Section Leader**, Programming Methodology and Abstractions, Stanford University, Stanford, CA. Responsible for 1-hour discussion sections, holding office hours and debugging C code, testing and grading student assignments for the two introductory CS courses at Stanford. |
| **1/98 - 6/99** | **Laboratory Assistant**, Yeast Genetics Laboratory, Department of Biology, Stanford University. |

**INVITED TALKS:**

| | |
|---|---|
| **08/11** | **Reykjavik, Iceland – ISMRM White Matter Study Group International Workshop on Advanced White Matter Imaging**<br>"Quantitative Magnetization Transfer Tutorial" |
| **06/11** | **Ohrid, Macedonia – Second International Seminar for MRI in the Republic of Macedonia**<br>"Myelin Imaging" |
| **11/10** | **Skopje, Macedonia – Second Conference on Medical Physics and Biomedical Engineering**<br>"Cross-relaxation Imaging" |
| **06/10** | **Uppsala, Sweden — Department of Information Technology**<br>"Quantitative Magnetic Resonance Imaging: A Key to Modeling Tissue Microstructure" |
| **08/08** | **Ohrid, Macedonia – First International Seminar for MRI in the Republic of Macedonia**<br>"Integrating Bound Pool Fractions and Diffusion Tensor Imaging" |

**PUBLICATIONS:**

**H.L.M. Cheng, N. Stikov. N. Ghugre, G.A. Wright.** Practical Clinical Applications of MR relaxometry. Accepted for publication in Journal of Magnetic Resonance Imaging, May 2012

**N. Stikov.** Improving the Accuracy of Cross-relaxation Imaging. International Journal of Imaging Systems and Technology 22(1): 67-72 (2012)

**N. Stikov, K. E. Keenan, J. M. Pauly, R. L. Smith, R. F. Dougherty, G. E. Gold.** Cross-relaxation Imaging of Human Articular Cartilage. Magnetic Resonance in Medicine 66(3): 725-734 (2011)

**N. Stikov, L.M. Perry, E. Ryklevskaya, A. Mezer, B. A. Wandell, J.M. Pauly, R. F. Dougherty.** Bound Pool Fractions Complement Diffusion Measures in Characterizing White Matter Micro and Macrostructure. Neuroimage 54(2): 1112-1121 (2011)

**K.L. Miller, R.H.N Tijssen, N. Stikov, T. Okell.** Steady-state MRI: Methods for Neuroimaging. Imaging in Medicine 3(1): 93-105 (2011)

**J. K. Barral, E. Gudmundson, N. Stikov, M. Etezadi-Amoli, P. Stoica, D. G. Nishimura.** A Robust Methodology for T1 Mapping. Magnetic Resonance in Medicine 64(4): 1057-1067 (2010)

**CONFERENCES AND WORKSHOPS:**

**N. Stikov, B. Sveinsson, C.L. Tardif, R.F. Dougherty, G.B. Pike.** Modeling g-ratio Measurements in Demyelinating Diseases. In: Proceedings of the ISMRM White Matter Study Group International Workshop on Advanced White Matter Imaging, Reykjavik 2011

**N. Stikov, C.L. Tardif, I. Levesque, J.K. Barral, G.B.Pike.** A Comparison of $T_1$ Mapping Methods in White Matter. In: Proceedings of the ISMRM White Matter Study Group International Workshop on Advanced White Matter Imaging, Reykjavik 2011

**N. Stikov, B. Sveinsson, C.L. Tardif, R.F. Dougherty, G.B. Pike.** Modeling MR-based g-ratio Measurements in Demyelinating Diseases. In: Proceedings of the Organization for Human Brain Mapping 17th Annual Meeting, Quebec City 2011

**N. Stikov, L.M. Perry, E. Ryklevskaya, A. Mezer, B. A. Wandell, J.M. Pauly, R. F. Dougherty.** Modeling and Measuring the Myelin g-ratio. In: Proceedings of the ISMRM 19th Annual Meeting, Montreal 2011

**C. L. Tardif, N. Stikov, I. Levesque, G. B. Pike.** A Comparison of B1 Mapping Methods. In: Proceedings of the ISMRM 19th Annual Meeting, Montreal 2011

**I. Levesque, N. Stikov, G. B. Pike, J. M. Pauly.** Drift in the Magnetization Transfer Signal: Effect in Quantitative MT Experiments. In: Proceedings of the ISMRM 19th Annual Meeting, Montreal 2011

**A. Mezer, R.F. Dougherty, N. Stikov, B. A. Wandell.** Using Proton Density and T1 Images to Quantify Brain Tissue. In: Proceedings of the Society for Neuroscience 40th Annual Meeting, San Diego 2010

**N. Stikov, L. M. Perry, A. Mezer, J. M. Pauly, B. A. Wandell, R. F. Dougherty.** In-vivo Measurement of the Myelin g-ratio in Humans by Combining Diffusion and Bound Pool Fractions. In: Proceedings of the Organization for Human Brain Mapping 16th Annual Meeting, Barcelona 2010

**N. Stikov, L. M. Perry, J. M. Pauly, B. A. Wandell, R. F. Dougherty.** Bound Pool Fractions Complement Diffusion Measurements in Characterizing White Matter Pathways. In: Proceedings of the Organization for Human Brain Mapping 15th Annual Meeting, San Francisco 2009

**N. Stikov, K. E. Keenan, J. M. Pauly, R. Smith, R.F. Dougherty, G.E. Gold.** Bound Pool Fractions Correlate with Proteoglycan and Collagen Content in Articular Cartilage. In: Proceedings of the ISMRM 18th Annual Meeting, Stockholm 2010

**J. K. Barral, N. Stikov, E. Gudmunson, P. Stoica, D. G. Nishimura.** Skin $T_1$ Mapping at 1.5T, 3T, and 7T. In: Proceedings of the ISMRM 17th Annual Meeting, Honolulu 2009

**N. Stikov, K. E. Keenan, K. L. Miller, J. K. Barral, G. E. Gold, J. M. Pauly.** Balanced SSFP Asymmetries in Cartilage. In: Proceedings of the ISMRM 17th Annual Meeting, Honolulu 2009

**N. Stikov, L. M. Perry, J. M. Pauly, B. A. Wandell, R. F. Dougherty.** Quantifying White Matter: Integrating Diffusion Tensor Imaging and Bound Pool Fractions. In: Proceedings of the ISMRM 17th Annual Meeting, Honolulu 2009

**N. Stikov, K. E. Keenan, G. E. Gold, J. M. Pauly**. Cartilage Bound Pool Fraction Maps In-vivo. In: Proceedings of the ISMRM Musculoskeletal Workshop Series, San Francisco 2009

**R. F. Dougherty, N. Stikov, B. A. Wandell, J. M. Pauly.** Quantitative MRI and DTI of Human White Matter Tracts Reveals Myelin Density Differences Across Tracts. In: Proceedings of the Society for Neurscience 38th Annual Meeting, Washington 2008

**N. Stikov, R. F. Dougherty, J. M. Pauly.** B1 Correction for Improved Bound Pool Fraction Maps. In: Proceedings of the ISMRM 16th Annual Meeting, Toronto 2008

**N. Stikov, A. Mutapcic, J. M. Pauly.** Optimized Design of Single-sided Quadratic Phase Outer Volume Suppression Pulses for Magnetic Resonance Imaging. In: Proceedings of the 11th Mediterranian Conference on Medical and Biological Engineering and Computing, Ljubljana 2007

**J. Barral, M. Lustig, N. Stikov, D. G. Nishimura.** RF Pulse Design for High Resolution Skin Imaging with FLASE. In: Proceedings of the ISMRM 15th Annual Meeting, Berlin 2007

**N. Stikov, T. Cukur, R.F. Dougherty, B. A. Wandell, J. M. Pauly.** Sensitivity Analysis of Cross-relaxation Imaging. In: Proceedings of the ISMRM 15th Annual Meeting, Berlin 2007

**N. Stikov, C. Cunningham, M. Lustig, J.M. Pauly.** Single-sided Quadratic Phase Outer Volume Suppression Pulses. In: Proceedings of the ISMRM 14th Annual Meeting, Seattle 2006

**DISTINCTIONS:**

**Montreal Neurological Institute, Centre of Excellence for Commercialization of Research Fellowship** – McGill University, July 2010

**Founder of MRBalkan.org** – Organized two international MR conferences in Ohrid, Macedonia, supported by the ISMRM International Outreach Program (www.mrbalkan.org)

**Centennial Teaching Assistant Award** – Stanford University, June 2007

**Outstanding Service Award** – Electrical Engineering Department, Stanford University, June 2003.

**B.S. with Distinction** – Stanford University, June 2001

**Member, Tau Beta Pi** – Engineering Honors Society, since June 2001

**Award 13-ti Noemvri** – award given by the city of Skopje, Macedonia to deserving citizens, November 1993

**Languages** – fluent in Macedonian, Bosnian/Serbian/Croatian, English, working knowledge of German and French.