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EDUCATION:

9/03 – 9/09	**Stanford University, PhD in Electrical Engineering**. Advisor: Prof. 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**. Advisor: Prof. Tom Cover. 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**. Advisor: Prof. Stephen Boyd. 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 language, culture and history.

RESEARCH:

7/10 – present	**Postdoctoral Fellow, McConnell Brain Imaging Center, Montreal Neurological Institute, McGill University.** 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.** Developed novel sequences for quantitative magnetic resonance imaging of cartilage in the human knee and myelin in the human brain.

TEACHING:

4/05 - 8/06 **Teaching Fellow, Stanford University.** Lecturer for three electrical engineering courses:

The Fourier Transform and its Applications
Stanford Electrical Engineering Department
Introductory Electronics
Stanford Center for Technical Innovation, Kyoto, Japan
Digital Systems II
Stanford Center for Technical Innovation, Kyoto, Japan

4/01 - 3/05 **Teaching Assistant, Electrical Engineering, Stanford University.** Won Stanford Centennial Teaching Award in 2007. Led review sessions, held office hours, prepared and graded exams for the following courses:

Introductory Electronics
Instructor: Butrus Khuri-Yakub
Introduction to Signals and Systems
Instructor: Stephen Boyd
Signal Processing and Linear Systems
Instructor: John Pauly
Introduction to Communications
Instructor: Andrea Goldsmith
The Fourier Transform and its Applications
Instructor: Dwight Nishimura
Linear Dynamical Systems
Instructor: Stephen Boyd
Wireless Communications
Instructor: Donald Cox

9/99 - 3/01 **Section Leader, Computer Science, Stanford University.** Led 1-hour discussion sections and on-site debugging sessions, tested and graded student assignments for the two introductory CS courses at Stanford:

Programming Methodology
Instructors: Eric Roberts
Programming Abstractions
Instructors: Julie Zelenski, Eric Roberts, Robert Plummer

SERVICE:

9/09 – present **Journal Reviewer –** Magnetic Resonance in Medicine (Distinguished Reviewer), Neuroimage, NMR in Biomedicine, Journal for Magnetic Resonance Imaging, IEEE – Transactions on Medical Imaging, Neurobiology of Aging

6/08 – present **Founder of MRBalkan.org** – Initiated and organized two international conferences for magnetic resonance imaging, with 150 participants from ten countries, supported by the ISMRM International Outreach Program (www.mrbalkan.org)

7/12	**Guest Editor of the 33rd issue (vol. 1) of Prilozi, the Journal of the Macedonian Academy of Sciences and Art**
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

MENTORING:

09/11 – 05-14	**Co-Advisor of Ye Gu, Master's Student at the Department of Biomedical Engineering, McGill University.** Initiated and supervised the Master's Project of Ye Gu, entitled "Quantitative Magnetization Transfer Imaging: Validation and Analysis Tool Development".
01/11 – 05/11	**Supervisor for an Undergraduate Design Project at the Department of Physics, McGill University.** Designed and oversaw the undergraduate research project of two physics students, Ye Gu and Yaaseen Atchia, during their graduation semester. The project consisted of simulating and implementing a magnetization transfer sequence on the Siemens Tim Trio scanner.
9/01 – 9/08	**Graduate Student Advisor, Department of Electrical Engineering, Stanford University.** Advised current and prospective graduate students through orientation sessions and weekly office hours, served as the graduate student representative in the EE Academic Affairs Committee, and maintained the EE class management system. For contribution to the department, awarded the EE Oustanding Service Award.

AWARDS AND DISTINCTIONS:

05/14	**Junior Fellow of the International Society for Magnetic Resonance in Medicine.** Award given annually to ten young researchers in recognition of their track record, academic potential, and commitment to the ISMRM.
01/14	**International Outreach Grant from the International Society for Magnetic Resonance in Medicine -** $15,000
07/10 – 07/12	**Postdoctoral Fellowship from the MNI Centre of Excellence in Commercialization and Research** - $50,000/year
06/11	**International Outreach Grant from the International Society for Magnetic Resonance in Medicine -** $15,000

09/08	**International Outreach Grant from the International Society for Magnetic Resonance in Medicine -** $15,000
6/07	**Centennial Teaching Assistant Award, Stanford University.** In honor of outstanding teaching at the Department of Electrical Engineering
6/03	**Outstanding Service Award, Electrical Engineering Department, Stanford University.** For contributions as a mentor to students in the EE Graduate Advising Center, active promotion of student viewpoints on the EE Academic Affairs Committee, and contributions to the improvement of EE Graduate Program requirements and documentation.
06/01	**Member, Tau Beta Pi**. Engineering Honors Society Stanford Chapter
09/97 – 06/01	**Elsie B. Ballantyne Scholarship for Undergraduate Studies at Stanford University -** $30,000/year
11/93	**Award 13-ti Noemvri.** Given by the city of Skopje, Macedonia to deserving citizens

INVITED TALKS:

05/15	**22nd Annual meeting of the International Society for Magnetic Resonance in Medicine: Educational Session, Toronto, Canada** "Multi-modal MR modeling"
07/14	**National Institute of Standards and Technology: Workshop on Standards for Quantitative MRI** "T1 Mapping: Searching for Common Ground"
05/14	**Third Magnetic Resonance Balkan Outreach Program, Ankara, Turkey** "Multi-modal White Matter Imaging"
04/14	**École Polytechnique, Department of Electrical Engineering, Montreal, Canada** "Histologie in vivo à l'aide de l'imagerie par résonance magnétique quantitative"
12/13	**Harvard University/MIT, Athinoula Martinos Center for Biomedical Imaging, Boston, USA** "*In vivo* magnetic resonance imaging of the myelin g-ratio"
12/13	**University of Calgary, Hotchkiss Brain Institute, Calgary, Canada** "*In vivo* magnetic resonance imaging of the myelin g-ratio"
11/13	**University of California San Francisco, Department of Radiology, San Francisco, USA** "*In vivo* magnetic resonance imaging of the myelin g-ratio"

11/13 **Stanford University, Center for Cognitive and Neurobiological Imaging, Stanford, USA**
"*In vivo* magnetic resonance imaging of the myelin g-ratio"

11/13 **University of Pennsylvania, Center for Functional Neuroimaging, Philadelphia, USA**
"*In vivo* magnetic resonance imaging of the myelin g-ratio"

02/13 **Douglas Mental Health University Institute, Montreal, Canada**
"Quantitative Magnetic Resonance Imaging: Key to Measuring Tissue Microstructure"

10/12 **Bilkent University, Ankara, Turkey**
"Measuring Tissue Microstructure with Quantitative Magnetic Resonance Imaging"

8/11 **ISMRM White Matter Study Group International Workshop on Advanced White Matter Imaging, Reykjavik, Iceland**
"Quantitative Magnetization Transfer Tutorial"

11/10 **Second Conference on Medical Physics and Biomedical Engineering, Skopje, Macedonia**
"Cross-relaxation Imaging"

6/10 **Uppsala University Department of Information Technology, Uppsala, Sweden**
"Quantitative Magnetic Resonance Imaging: A Key to Modeling Tissue Microstructure"

8/08 **First International Seminar for MRI in the Republic of Macedonia, Ohrid, Macedonia**
"Integrating Bound Pool Fractions and Diffusion Tensor Imaging"

JOURNAL PUBLICATIONS:

N. Stikov, M. Boudreau, C.L. Tardif, I.R. Levesque, J.K. Barral, G.B.Pike. On the Accuracy of T1 Mapping: Searching for Common Ground. Magnetic Resonance in Medicine. doi: 10.1002/mrm.25135

A.A. Mezer, J. Yeatman, **N. Stikov**, K. Kay, N. Cho, R.F. Dougherty, L.M. Perry, J. Parvizi, L.H. Hua, K. Butts-Pauly, B. Wandell. Measuring within the Voxel: Brain Tissue Volume in Individual Subjects. Nature Medicine 19: 1667-1672

H.L.M. Cheng, **N. Stikov**, N. Ghugre, G.A. Wright. Practical Clinical Applications of MR relaxometry. Journal of Magnetic Resonance Imaging 36(4): 805-824 (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)

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)

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)

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:

N. Stikov, J. S.W. Campbell, M. Boudreau, S. Narayanan, T. Stroh, S. Nuara, J. Novek, S. Frey, M. Ho, B. Bedell, G.B. Pike. *In vivo* Histology of the Myelin g-ratio. In: Proceedings of the OHBM 20th Annual Meeting, Hamburg 2014

N. Stikov, J. S.W. Campbell, M. Lavallée, T. Stroh, S. Frey, J. Novek, S. Nuara, M. Ho, B. Bedell, G.B. Pike. *In vivo* Measurement of the Myelin g-ratio with Histological Validation. In: Proceedings of the ISMRM 22nd Annual Meeting, Milan 2014
*** Magna Cum Laude Merit Award, White Matter Study Group Competition Finalist**

J.S.W. Campbell, **N. Stikov**, R.F. Dougherty, G.B. Pike. Combined NODDI and qMT for full-brain g-ratio mapping with complex subvoxel microstructure. In: Proceedings of the ISMRM 22nd Annual Meeting, Milan 2014
*** One of six abstracts selected for a special Focused Discussion Session**

M. Boudreau, **N. Stikov**, G.B.Pike. A B_1 Insensitive qMT Protocol. In: Proceedings of the ISMRM 22nd Annual Meeting, Milan 2014

M. Boudreau, C. L. Tardif, **N. Stikov**, G.B.Pike. A Comparison of B_1 Mapping Methods for T_1 Mapping at 3T. In: Proceedings of the ISMRM 22nd Annual Meeting, Milan 2014

J. S.W. Campbell, **N. Stikov**, M. Lavallée, T. Stroh, S. Frey, J. Novek, S. Nuara, M. Ho, B. Bedell, G.B. Pike. Full brain g-ratio mapping with

NODDI-based axon volume fraction. In Proceedings of the ISMRM Diffusion Study Group Workshop on Diffusion as a Probe of Neural Tissue Microstructure, Podstrana, Croatia 2013

N. Stikov, A. Giorgio, J.S.W. Campbell, E. Mazerolle, S. Narayanan, N. De Stefano, G.B. Pike. A Region of Interest Approach to Multiple Sclerosis Tractometry. In: Proceedings of the ISMRM White Matter Study Group Workshop on Multiple Sclerosis as a Whole-brain Disease, London 2013

N. Stikov, A. Giorgio, J.S.W. Campbell, E. Mazerolle, N. De Stefano, G.B. Pike. Magnetization Transfer Ratio Tractometry in Multiple Sclerosis. In: Proceedings of the ISMRM 21st Annual Meeting, Salt Lake City 2013

M. Boudreau, **N. Stikov**, G.B.Pike. T1 Mapping: Should we Agree to Disagree? In: Proceedings of the ISMRM 21st Annual Meeting, Salt Lake City 2013

N. Stikov, C.L. Tardif, I. Levesque, J.K. Barral, G.B.Pike. Validation of T1 Mapping Techniques: Are Phantom Studies Sufficient? In: Proceedings of the ISMRM 20th Annual Meeting, Melbourne 2012

I.R. Levesque, **N. Stikov**, G.B. Pike. Methods for Quantitative Magnetization Transfer Imaging. Magna Cum Laude Merit Award for Educational Poster at the ISMRM 20th Annual Meeting, Melbourne 2012

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

OTHER:

Basic Business Skills Certificate – Desautels Faculty of Management, McGill University, December 2012

Languages – Macedonian, Bosnian/Serbian/Croatian, English, French, German.

REFERENCES:

John Pauly, PhD
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