Vladimir S. FONOV Ph.D.

- E-mail: v.s.fonov@ilmarin.info
- Publications (online references):
    - [Google Scholar: http://scholar.google.ca/citations?user=4YCK0vQAAAAJ](http://scholar.google.ca/citations?user=4YCK0vQAAAAJ)
    - [Scopus Author ID: 57188953412](#)
    - orcid.org/0000-0003-3402-7749

Education

- 1998 Moscow Institute of Physics and Technology (Russia) B.Sc. , Applied Physics & Mathematics
- 1999 Moscow Institute of Physics and Technology (Russia) M.Sc. , Applied Physics & Mathematics
- 2003 Heriot Watt University (UK) Ph.D., Digital Image Processing & Optical Measurements

Research interests

- MRI image processing, population studies, brain morphometry.

Work Experience

- July 2020 - Present McConnell Brain Imaging Centre Montreal Neurological Institute, McGill University (Canada). Academic Associate, MRI image processing research.
- June 2019 - June 2020 Rogue Research Inc. (Canada). Research scientist, advanced software developer.
- Aug 2017 - June 2019 NeuroRx Research (Canada). MRI Acquisition & Analysis Expert.
- Nov 2009 - Jul 2017 NeuroRx Research (Canada). Member of software development team.
- Jul 2008 - June 2019 McConnell Brain Imaging Centre Montreal Neurological Institute, McGill University (Canada). Research Associate, MRI image processing research.
- Jul 2005 - 2008 McConnell Brain Imaging Centre Montreal Neurological Institute, McGill University (Canada). Postdoc, MRI image processing research.
- Nov 2003 - Jun 2005 Innovative Scientific Solutions Inc. (USA). Scientist, software developer optical measurements.

Select Publications

For full list see orcid.org/0000-0003-3402-7749

- U Yoon, VS Fonov, D Perusse, AC Evans, et al, "The effect of template choice on morphometric analysis of pediatric brain data" Neuroimage 2009
- Z Caramanos, VS Fonov, SJ Francis, S Narayanan, GB Pike, DL Collins, et al "Gradient distortions in MRI: characterizing and correcting for their effects on SIENA-generated measures of brain volume change" NeuroImage 2010
- V Fonov, AC Evans, K Botteron, CR Almli, RC McKinstry, DL Collins "Unbiased average age-appropriate atlases for pediatric studies" NeuroImage 2011
- P Coupé, JV Manjón, V Fonov, J Pruessner, M Robles, DL Collins "Patch-based segmentation using expert priors: Application to hippocampus and ventricle segmentation" NeuroImage 2011
- B Aubert-Broche, V Fonov, R Ghassemi, S Narayanan, DL Arnold, et al "Regional brain atrophy in children with multiple sclerosis" Neuroimage 2011
- A Kerbrat, B Aubert-Broche, V Fonov, S Narayanan, JG Sled, DA Arnold, et al "Reduced head and brain size for age and disproportionately smaller thalami in child-onset MS" Neurology 78 (3), 194-201 2012
- SF Eskildsen, P Coupé, V Fonov, JV Manjón, KK Leung, N Guizard "BEaST: brain extraction based on nonlocal segmentation technique" NeuroImage 2012
- Brain Development Cooperative Group "Total and regional brain volumes in a population-based normative sample from 4 to 18 years: the NIH MRI Study of Normal Brain Development" Cerebral Cortex 2012
- P Coupé, SF Eskildsen, JV Manjón, VS Fonov, JC Pruessner, M Allard, et al "Scoring by nonlocal image patch estimator for early detection of Alzheimer's disease" NeuroImage: Clinical 2012
- P Coupé, SF Eskildsen, JV Manjón, VS Fonov, DL Collins, et al. "Simultaneous segmentation and grading of anatomical structures for patient's classification: application to Alzheimer's disease" NeuroImage 2012
- B Aubert-Broche, VS Fonov, D García-Lorenzo, "A new method for structural volume analysis of longitudinal brain MRI data and its application in studying the growth trajectories of anatomical brain structures in childhood" Neuroimage 2013
- SF Eskildsen, P Coupé, D García-Lorenzo, VS Fonov, JC Pruessner et al "Prediction of Alzheimer's disease in subjects with mild cognitive impairment from the ADNI cohort using patterns of cortical thinning" Neuroimage 2013
- JV Manjón, P Coupé, A Buades, V Fonov, DL Collins, M Robles "Non-local MRI upsampling" Medical image analysis 14 (6), 784-792 2010
- S Ducharme, MD Albaugh, JJ Hudziak, KN Botteron, TV Nguyen, et al "Anxious/depressed symptoms are linked to right ventromedial prefrontal cortical thickness maturation in healthy children and young adults" Cerebral cortex 2013
- VS Fonov, A Le Troter, M Taso, B De Leener, G Lévêque, M Benhamou, et al "Framework for integrated MRI average of the spinal cord white and gray matter: The MNI–Poly–AMU template" Neuroimage 2014

- S Karama, ME Bastin, C Murray, NA Royle, L Penke, SM Maniega, et al "Childhood cognitive ability accounts for associations between cognitive ability and brain cortical thickness in old age" Molecular psychiatry 2014
- K Weier, VS Fonov, K Lavoie, J Doyon, DL Collins "Rapid automatic segmentation of the human cerebellum and its lobules (RASCAL) Implementation and application of the patch-based label-fusion technique with a template library to segment the human cerebellum" Human Brain Mapping 2014
- EE Bron, M Smits, WM Van Der Flier, H Vrenken, F Barkhof, P Scheltens, et al "Standardized evaluation of algorithms for computer-aided diagnosis of dementia based on structural MRI: the CADDementia challenge" NeuroImage 2015
- K Weier, C Till, VS Fonov, EA Yeh, DL Arnold, B Banwell, DL Collins, "Contribution of the cerebellum to cognitive performance in children and adolescents with multiple sclerosis" Multiple Sclerosis 2016
- B De Leener, S Levy, SM Dupont, VS Fonov, N Stikov, DL Collins, V Callot, J Cohen-Adad, "SCT: Spinal Cord Toolbox, an open-source software for processing spinal cord MRI data" NeuroImage 2017
- JE Romero, P Coupé, R Giraud, VT Ta, VS Fonov, MTM Park, MM Chakravarty, AN Voineskos, JV Manjon, J.V. "CERES: A new cerebellum lobule segmentation method" NeuroImage 2017
- HC Hazlett, H Gu, BC Munsell, SH Kim, M Styner, JJ Wolff, JT Elison, et al, "Early brain development in infants at high risk for autism spectrum disorder" Nature 2017
- M Dadar, VS Fonov, DL Collins "A comparison of publicly available linear MRI stereotaxic registration techniques" NeuroImage 2018
- A Carass, JL Cuzzocreo, S Han, CR Hernandez-Castillo, PE Rasser, M Ganz, J Beliveau, J Dolz, I Ben Ayed, C Desrosiers, B Thyreau, JE Romero, P Coupe, JV Manjonn, VS Fonov, DL Collins, SH Ying, CU Onyike, D Crocetti, BA Landman, SH Mostofsky, PM Thompson, JL Prince "Comparing fully automated state-of-the-art cerebellum parcellation from magnetic resonance images" NeuroImage 2018
- B De Leener, VS Fonov, DL Collins, V Callot, N Stikov, J Cohen-Adad "PAM50: Unbiased multimodal template of the brainstem and spinal cord aligned with the ICBM152 space" NeuroImage 2018
- L Wang, D Nie, G Li, E Puybareau, J Dolz, Q Zhang, F Wang, J Xia, Z Wu, J Chen, K-H Thung, T D Bui, J Shin, G Zeng, G Zheng, VS Fonov, A Doyle, Y Xu, P Moeskops, JPW Pluim, C Desrosiers, IB Ayed, G Sanroma, OM Benkarim, A Casamitjana, V Vilaplana, W Lin, G Li, D Shen "Benchmark on Automatic 6-month-old Infant Brain Segmentation Algorithms: The iSeg-2017 Challenge" IEEE Transactions on Medical Imaging 2019
- S Narayanan, K Nakamura, VS Fonov, J Maranzano, Z Caramanos, PS Giacomini, DL Collins, DL Arnold "Brain volume loss in individuals over time: Source of variance and limits of detectability" NeuroImage 2020

Patent

- MA Styner, SH KIM, DL COLLINS, VS Fonov, BC Munsell, J Piven, HC Hazlett "Methods, systems, and computer readable media for utilizing brain structural characteristics for predicting a diagnosis of a neurobehavioral disorder" US Patent (pending) 2018

Peer Review contributions

Publons profile: https://publons.com/researcher/AAG-9572-2019/

- NeuroImage
- Human Brain Mapping
- Medical Image Analysis
- IEEE Transactions on Medical Imaging

Open Source Software contributions

- Github profile: vfonov
- MNI minc-toolkit: https://github.com/BIC-MNI/
- Contribution to open source scientific software
  - Insight Toolkit: http://www.itk.org/
  - ANTs: http://stnava.github.io/ANTs/
  - libigl: https://libigl.github.io/

Awards received

- Second Place on All-Russian Contest on Physics, 1994
- Stirling University Beginners fencing competition, Epee 1st, 2001
- 5th Kyu Ki-Aikido, 2005
- 5th Kyu Aikido-Aikikai, 2006
- 4th Kyu Aikido-Aikikai, 2007
- 3rd Kyu Aikido-Aikikai, 2011
- 2nd Kyu Aikido-Aikikai, 2017

Languages

- Russian (native), English (fluent), French (intermediate)