Valeriya Pronina

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https://vpronina.github.io/

Education

Skolkovo Institute of Science and Technology — **Moscow, Russia**
Center for Computational and Data-Intensive Science and Engineering (CDISE) — *2019 - present*
Started a Ph.D. under the supervision of Prof. Dmitry Dylov on the topic
"Image recovery with trainable restoration algorithms"

École nationale supérieure des Mines de Saint-Étienne (EMSE) — **Saint-Étienne, France**
Biomedical Engineering and Design (BMED) - Master of Research, mention Bien — *2017 - 2018*
Thesis: "Human tissue characterization using machine learning approach"
GPA 15.52/20

Bauman Moscow State Technical University (BMSTU) — **Moscow, Russia**
Biomedical Systems and Technologies – Master, with Honors — *2015 - 2017*
Thesis: "Development of a hardware-software complex for analysis of multichannel signals for functional diagnostics"
GPA 5.0/5.0

Bauman Moscow State Technical University (BMSTU) — **Moscow, Russia**
Biomedical Engineering – Bachelor, with Honors — *2011 - 2015*
Thesis: "Development of a biotechnical system with an optical diagnostic channel"
GPA 4.78/5.0

Experience

CREATIS, Biomedical Imaging Research Lab (Lyon, France) — www.creatis.insa-lyon.fr
Research Internship (Master) — *Mar 2018 - Sep 2018*
Research on Deep learning based material decomposition for spectral CT.

GE HEALTHCARE, Industrial Conglomerate (Moscow, Russia) — www.gehealthcare.com
Technical Sales Intern (Diagnostic Cardiology) — *Mar 2016 - Aug 2017*
Internship during Master studies in a Medical Equipment company.
Examination of equipment; organization of DEMO equipment movements to sites, including preparation and verification of the support documents; preparation of technical documentation.

YOTA DEVICES, Mobile Broadband (Moscow, Russia) — www.yotadevices.com
Intellectual Property Department Intern — *Oct 2015 - Mar 2016*
Analysis of algorithms and technical solutions for patentability of the Yota Phone; creation and maintenance of a patentable objects database.

Honors and Awards

- **Scholarship of the President of the Russian Federation (2016)**
  - Scholarship for students who have shown outstanding abilities in scientific and educational activities and work in priority areas of modernization and technological development of Russian Federation.
- **Scholarship of the Academic Council (2016-2017, BMSTU)**
  - Scholarship for students who have shown achievements in scientific and educational activities.

Core Technical Skills

Languages: Python, MATLAB, LaTeX, Assembly
Libraries: Pytorch, TensorFlow
Software: ImageJ, AutoCAD
Operating Systems: Windows, Linux

Publications

- **Conference papers**
  - ***V. Pronina**, F. Kokkinos, S. Lefkimmiatis, D. Dylov, "Microscopy Image Restoration with Deep Wiener-Kolmogorov filters", arXiv:1911.10989 [eess.IV], Nov. 2019. Available: https://arxiv.org/abs/1911.10989. **(submitted to a conference)***
- **Conference proceedings**
  - *JFPJ Abascal, N. Ducros, **V. Pronina**, S. Bussod, P. Douek, S. Arridge, A. Hauptmann, F. Peyrin. "Nonlinear material decomposition in spectral CT using deep learning". Applied Inverse Problems conference, Grenoble, 2019*
- **Journals**
  - *A. Dogadov, A. Maslov, **V. Pronina**, N. Rudnyi, A. Kobelev, S. Shchukin. "An EMG-based adaptive algorithm for motion detection in non-stationary noise". Biomedical radioelectronics, no.7, 2016 (in Russian)*
  - ***V. Pronina**, P.Luzhnov. "Study of the algorithms for identifying motion artifacts in the analysis of signals in functional diagnostics". Scientific and Technical Bulletin of BMSTU, no.4, 2016 (in Russian)*
  - ***V. Pronina**, P.Luzhnov. "Hardware-software complex for non-invasive analysis of glucose levels in the human body". Scientific and Technical Bulletin of BMSTU, no.8, 2015 (in Russian)*
  - ***V. Pronina**, P.Luzhnov. "Hardware-software complex for detecting weak optical signals for analysis of transparent biological media". Scientific and Technical Bulletin of BMSTU, no.3, 2015 (in Russian)*

Extracurricular Projects

LLC "Myolimb" (Moscow, Russia) https://www.facebook.com/myolimb/
Participation in the development of a forearm prosthesis control system. *2016 - 2017*

European Synchrotron Radiation Facility (Grenoble, France) https://www.esrf.eu
Participation in the ESRF MD1142 project "Validation of spectral CT compared to monochromatic SR CT: Detection of early osteoarthritis". *July 2018*

Languages

Russian (Native), English (Advanced), French (Intermediate)