Dr. Azamat Elmurodov

Nassauische Str 47, 10717 Berlin, Tel: +49(0)17674936678, aelmurodov@gmail.com

Curriculum Vitae

Personal Data	
Name and Last name	Azamat Elmurodov
Citizenship	Uzbek
Date of Birth	29.04.1977
Marital Status	Married – 1 children
Career Summary	
GitHub	https://github.com/pythonuzgit/elmurodov

Sep 26 - Dec 20. 2022 — Data Science Retreat – Full time
Data Scientist
Berlin, Germany

- Basics of programming in data science: python (pandas, visualization), sql, statistics, probability theory, containers, databases, git
- Classical machine learning approaches: linear regression, tree-based approaches, clustering
- Deep learning: for natural language processing, computer vision, graph neural networks, reinforcement learning
- Portfolio project: Drone Tower Inspection Data Science Project with K-Nearest Neighbors and K-means to show the similarity of images of each other using Cosine distance similarity and predict classification of Drone images.
- **Skills**: TensorFlow/Keras ·Pytorch · Linux · Amazon Web Services (AWS) · Artificial Intelligence (AI) · Data Science · Computer Vision · Graph neural networks · PyTorch · TensorFlow · SQL · Natural Language Processing (NLP) · Deep Learning · Machine Learning · Python (Programming Language)

2013 - 2016 — Institute of Nuclear Physics, Uzbekistan Academy of Science
Researcher
Computer calculation of non-linear in-plane resistivity and Hall coefficient in the normalstate of cuprates: polaronic approach

Technologies: Python, Fortran, Mathematika, Matlab and Maple

- Analytical and Numerical solution of Integral equations
- Version of mean-field approach(MFA)

2010 - 2012 — Department of Mathematics and Physics, Charles University, Prague, Czech Republic
PostDoc Researcher
Theoretical study of the interaction of a normal current and influence of this interaction to the phase-slip regime

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Technologies: Python, Fortran, Mathematika, Matlab and Maple

- The solution of the non-linear differential equations
- The numerical approach was based on the explicit(Euler) iterative technique
- Fourier Filtering method
- Used numerical techniques to solve non-linear equations with boundary conditions 2D

20.10.2008 — Department of Physics, University of Antwerpen, Belgium
Doctor of Science
Scientific research in the field of: Nonstationary phenomena induced by phase slip centers in mesoscopic ana nanosize superconducting wires

Technologies: Python, Fortran, Mathematika, Matlab and Maple

- Fourier Filtering method
- Used different numerical techniques to solve non-linear equations with different boundary conditions in all 1D, 2D and 3D

2001 - 2003 — Samarkand State University, Samarkand. Uzbekistan
Lecturer and Researcher
Lecturer of the Computer calculation of Non-linear differential equations

1999 - 2000 — Samarkand State University, Samarkand. Uzbekistan
Leading specialist of the Department of Marketing

Education & Qualification

2003 - 2008 — University of Antwerpen, Belgium
Department of Physics
Degree: PhD study

Title of the Thesis: Study of non stationary in current carrying superconductors within the framework of the extended time dependent Ginzburg-Landau equations.

1999 - 2001 — Samarkand State University, Uzbekistan
Department of Mathematics
Degree: Master’s degree

Title of the thesis: I study spectral properties of the three-particle discrete Schrödinger operator.

1995 - 1999 — Samarkand State University, Uzbekistan
Department of Mathematics
Degree: Bachelor’s degree

Title of the thesis: Regular problem of Shtorm-Ziuwill.

Key Technical Skills

Programming languages	Python and Fortran
Framework/Libraries	PyTorch, TensorFlow, Keras, spaCy, Scikit-learn, SQL.

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Platforms	Os(Windows and Linux)
Not intensive used Frameworks	Mathematika, Matlab and Maple
Math Science	• Graph Neural Network • Deep Learning (TensorFlow and Keras) • Computer Vision • Natural Language Processing and SpaCy • Machine learning
Language skills	Languages: Uzbek – Native, English – Fluent, German – Intermediate

Scientific awards

June 9-25, 2005	The best poster presentation in Joint International workshop on "Arrays of Quantum Dots and Josephson Junctions (AQDJJ) Kiten, Bulgaria

Other Activities & Accomplishments

I. 7 th International student Summer school on Nuclear Physics and Applications (NUCPHYS-SC&APPL), Poznan, Poland June 24-July 4, 2015
II. 5 th International Conference on Magnetic and Superconducting Materials (MSM07), Khiva, Uzbekistan, September 2007

Publications

1. Orifjon Ganiev and Azamat Elmurodov, Explanation of non-linear in-plane resistivity and Hall coefficient in the normal state of cuprates: polaronic approach, Journal of Superconductivity and Novel Magnetism (JOSC)) DOI:10.1007/s10948-017-4398-5 (2017)
2. P. Lipavsky, A. Elmurodov, Pei-Jen Lin, P. Matlock, and G. R. Berdiyorov, Effect of normal current corrections on the dynamics in type-II superconductors, Phys. Rev. B 86, 144516 (2012)
3. G. B. Berdiyorov, A. K. Elmurodov, D. Y Vodolazov, and F. M. Peeters, Conversion of vortex lines intophase slip lines in thin wide superconducting strips of finite length: implication for the I-V response, Phys. Rev. B 79, 174506 (2009)
4. A. K. Elmurodov, D. Y. Vodolazov, F. M. Peeters, S. Michotte, S. Adam, F. de Menten de Horne, L. Piraux, D. Lucot, D. Mailly, Phase-slip phenomena in NbN superconducting nanowires with leads, Phys. Rev. B 78, 214519 (2008)
5. A. K. Elmurodov, D. Y. Vodolazov, and F. M. Peeters, The breakup of the vortex structure in a mesoscopic wire containing a construction, Europhys. Lett. 74, 151 (2006)
6. D. Y. Vodolazov, A. K. Elmurodov, and F. M. Peeters, Influence of electromagnetic radiation on phase slip process in superconducting films: Rectification under asymmetric in time ac signal, Phys. Rev. B 72, 134509 (2005)

Berlin, Nov 27. 2023