Aleksei Zhuravlev

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EDUCATION

MSc in Computer Science — **University of Bonn, Germany**
Grade: 1.2 / 1.0 — **Oct 2022 – Apr 2025**

BSc in Physics — **Moscow State University, Russia**
Sep 2018 – Aug 2022

RESEARCH EXPERIENCE

Master Thesis / CVPR 2025 — **MPI for Informatics**
Denoising Functional Maps: Diffusion Models for Shape Correspondence — **Apr 2024 – Apr 2025**
Publications: [1]

- Trained a Denoising Diffusion Model (DDPM) to find correspondence between 100 scans of humans from the FAUST dataset and 32 animal scans
- Evaluated competitors based on Vision-Language Models, improved the correspondence accuracy by 6%

Research Assistant — **Moscow State University**
Segmentation of Satellite Images — **Nov 2019 – Nov 2021**
Publications: [2], [3]

- Utilized the Very Deep Super-Resolution (VDSR) network to upscale the low-resolution satellite images of neutron stars
- Implemented a background subtraction model based on the R-CNN network; achieved a 3x speedup compared to the GrabCut algorithm

PROJECTS

NeRF-based Hand Reconstruction
Project Page

- An implicit 3D reconstruction of a human hand from monocular and multi-view sequences, based on Interhand2.6m dataset.

Knowledge Distillation for Depth Estimation
Project Page, Paper, Code

- A lightweight monocular depth estimation model for UAVs, based on knowledge distillation from the foundational model “Depth Anything”.

Text Style Transfer using Transformer Models
Project Page, Paper, Poster

- An assessment of the ability of 3 NLP models to transfer text style with an emphasis on translation from informal to formal style.

PUBLICATIONS

1. **Denoising Functional Maps: Diffusion Models for Shape Correspondence**
   A. Zhuravlev, Z. Lähner, V. Golyanik; *CVPR 2025*
   Project Page, Paper, Code

2. **Toward Constraining Axions with Polarimetric Observations of the Isolated Neutron Star RX J1856.5–3754**
   A. Zhuravlev, R. Taverna, R. Turolla; *The Astrophysical Journal 2022*
   Paper

3. **Photon-Axion Mixing in Thermal Emission of Isolated Neutron Stars**
   A. Zhuravlev, S. Popov, M. Pshirkov; *Physics Letters B 2021*
   Paper