Aleksei Zhuravlev

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

Detection of Dark Matter in Neutron Stars

Moscow State University Nov 2019 – Nov 2021

Publications: [2], [3]

• Numerically modelled the formation of dark matter in the atmosphere of neutron stars and explored how satellite observations can help estimate its properties.

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