OLEKSANDRA (SASHA) OSTAPENKO

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WORK EXPERIENCE

Research Assistant
the University of British Columbia

September 2021 – Present Vancouver, BC

- Performed **image analysis** of Radio and X-ray telescopes data using Python tools to discover properties of the intracluster gas in galaxy clusters. This involved working with an archival database, running simulations, **analysis of images, modeling, and building a processing pipeline.**
- **Developed a python package** (adpipy) to perform statistical analysis and visualization of data cube images.

Science-Policy Research Assistant
the University of British Columbia

September 2022 – May 2023 Vancouver, BC

- Estimated the **impact of satellites** and debris re-entry on Earth's atmosphere.
- Provided **light pollution policy regulation**: project of IAU Center for the protection of the Dark and Quite Skies from Satellite Constellation Interference.
- Worked on **FCC licensing documentation** (mostly **spectrum granting**).

Teacher Assistant of Astrobiology class
the University of British Columbia

Sept 2021 – May 2022 Vancouver, BC

- Provided office hours for more than 70 undergraduate students, and graded homework and exams.

Intern
Astronomical Observatory of the Jagiellonian University

July 2019, July 2020 Kraków, Poland

- Performed time series and image analysis to study the active galactic nuclei and properties of the galaxies' interactions.

EDUCATION

Master of Science in Astronomy
the University of British Columbia

Sept 2021– Present Vancovuer, BC

B.Sc. in Physics and Astronomy
Taras Shevchenko National University of Kyiv

2017 – 2021 Kyiv, Ukraine

AWARDS

- Awarded with International Tuition Award ($3200 per year) by the Faculty of Graduate and Postdoctoral Studies by the University of British Columbia.
- Awarded with enhanced scholarship by Taras Shevchenko National University of Kyiv.
- Awarded with scholarship during all semesters of bachelor studying by Taras Shevchenko National University of Kyiv.

SKILLS AND TOOLS

- **Python** (i.e. numpy, scipy, pandas, matplotlib, shapely, astropy, pyregion, aplpy ...)
- **R** (i.e. ggplot2, FITSio, dplyr ...), **SQL**
- **Remote Computing (ssh), Terminal command line, Bash Scripting**
- **Version Control (Git)**
- **Microsoft Office tools** (Microsoft Word, Excel)
- **Latex**, **HTML/CSS**
- **Wolfram Mathematica**

- **Project managment** Successfully combined several research projects, teaching, and management of administrative tasks.
- **Problem-solving** In course of my studies successfully solved multiple diverse scientific, technical, and management problems.
- **Public Presentation** Presented my research at multiple international scientific conferences to an audience of more than 50 people.
- **Event organizing** Organized scientific conferences, festival of innovations, and music events for more than 500 participants.

ACHIVEMENTS

- 2 Oral presentations at *YMCA Institut d'Astrophysique de Paris* and *Galaxy seminar Institut d'Astrophysique de Paris 2023*: A multi-wavelength study of the intracluster medium in the MS0451 galaxy cluster using ALMA and Chandra observations.
- *Publication:* **O. Ostapenko**, M. Tarnopolski, N. Żywucka, J. Pascual-Granado (2020) Searching for signatures of chaos in gamma-ray light curves of selected Fermi-LAT blazars. Monthly Notices of the Royal Astronomical Society.
- Poster presentation at *CASCA 2021* with work 'Searching for Signatures of Chaos in Gamma-ray Light Curves of Selected Fermi/LAT Blazars'.
- Oral presentation at 27^{th} *Young Scientists' Conference on Astronomy and Space Physics* with work 'Investigation of the detectability of bright GRBs in TeV range with future neutrino observatories'.
- Oral presentation at 27^{th} *Young Scientists' Conference on Astronomy and Space Physics*: with work 'Signatures of Chaos in Gamma-ray Light Curves of Selected Fermi/LAT Blazars. International conference'.

LANGUAGES

English | Ukrainian | Russian | German