

Hala Alqubelat, M.S.

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RESEARCH INTERESTS

- Star-forming regions and young stellar objects
- Variable T-Tauri stars detection and classification
- Galaxy and stars evolution

EDUCATION

Computer Science Course (CS50), Harvard university **Oct.2022-present**

Specialist degree in Astronomy, Ural Federal University, Ekaterinburg, Russia **2016 - 2022**

Average unweighted GPA: 4.02/5
Selected as one of the best 10 % of students according to the results of the general rating, educational, scientific, and extracurricular activities for the year 2021/2022¹

College-preparatory school, Ural Federal University **2015 - 2016**

AWARDS AND HONORS

Awarded a scholarship by the Ministry of Education and Science of the Russian Federation to study the Russian language for one year and major in astronomy for six years

A winner of the Open International Olympiad at St.Petersburg university- PhD program in physics and astronomy² **Apr.2022**

RESEARCH EXPERIENCE

Mentored by Mr.Vadim Krushinsky and Dr.Anton Seleznev

Planetary nebulae: determining the temperature of a white dwarf, electron density, and the relationship between the ratio of the radiation intensity in lines with absorption as a summer practice at Kourovka astronomical observatory **July 2017**

Distance determination to star-forming regions in Orion Molecular cloud using GAIA DR2 data **Feb.2018-May 2018**

Distance determination to young stellar objects (YSOs) in IC 348, NGC 1333, and L 1450 in the Perseus Molecular cloud using GAIA DR2 data **Feb.2019-June 2019**

Astrophysical practice at Kourovka astronomical observatory: Solar and stellar observations **July 2019**

¹<https://programms.edu.urfu.ru/ru/8983/top-students/2021/2/>

²https://abiturient.spbu.ru/files/2022/olymp-asp-ino/2022_ino_olymp_result.pdf

Analysis and classification of variable young stellar objects in the open cluster IC 1805 using infrared surveys and ZTF data **Feb.2021-June 2021**

Variable YSOs in the photometric survey ZTF **July 2021-Sep.2021**

Thesis Theme: Searching for young stars in synoptic surveys **2021-2022**

OBSERVATIONS	<ul style="list-style-type: none"> • Observation of massive young stellar objects in IC 1805 using The Astronomical Near-Infrared Camera-spectrograph (ASTRONICAM) at SAI/MSU 2.5-m telescope in broad-band filters: J, H, K, and narrow-band filters: BrG, Fe[II], H(1-0), H_2 	Nov.2022
WORKS IN PROGRESS	<ul style="list-style-type: none"> • “Searching for Variable Young Stars in Synoptic surveys.” The article manuscript is in progress, to be submitted for publication in February 2023. 	
SKILLS	<ul style="list-style-type: none"> • Programming languages: Python(Matplotlib, NumPy, SciPy, Pandas, AstroPy), Jupyter Notebook, C/C++, Rstudio(beginner) • Familiar with Bash, Git • Software: Microsoft office, LaTeX, visualization tool for processing astronomical data (SAOImageDS9, Aladin) • Languages: Arabic(Native), English (Fluent), Russian(Fluent), Spanish(Intermediate) 	
PROFESSIONAL TRAINING	<ul style="list-style-type: none"> • <i>Internship at SAI/MSU</i> Gaining experience in conducting observations. Data analysis using Python. Observing massive YSOs jets in IC 1805 using ASTRONICAM • <i>Internship at NAMA Strategic Intelligence Solutions</i> Working on launching the first green index in Jordan: collecting and analyzing data, and writing reports • <i>Mentorship at Ural Federal University</i> Training in data analysis required for observations with Mr.Vadim Krushinsky 	<p>Oct.2022-present</p> <p>Oct.2022-present</p> <p>July 2022-Sep.2022</p>
TEACHING EXPERIENCE	<ul style="list-style-type: none"> • <i>Physics tutor for high school students</i> • <i>Astronomy tutor</i> Introductory lessons in astronomy to high school students 	<p>Nov.2022-present</p> <p>2021-2022</p>
PROFESSIONAL DEVELOPMENT	<ul style="list-style-type: none"> • Bayesian Statistics Using R, University of Canterbury • Data-driven Astronomy, The University of Sydney • XXII Spanish Virtual Observatory School: Aladin, TOPCAT, HIPS, and MOCs using Python 	<p>Oct.2022-present</p> <p>Jan.2023</p> <p>Oct.2022-Nov.2022</p>

EXTRA-CURRICULAR ACTIVITIES

Community service and outreach

REFEREES

- Practical session on the use of Gaia DR3 BP/RP spectra: GaiaXPy, xp coefficients, classical and xp spectra (in Spanish) by Complutense University of Madrid **Oct. 2022**
- A participant in the Gaia Journal Club conducted by ICCUB (talk) **Oct.2022-present**
- A participant in the seminars of astrophysics conducted by SAI/ Moscow State University (talk) ³ **June 2022-present**
- Workshop by the Institute of Cosmos Sciences (ICCUB) under the theme ' Star Clusters: The Gaia Revolution' **Oct. 2021**
- ZTF Summer School 2021 conducted by Caltech under the theme 'variable stars'
- Writing in the Sciences-Stanford University/Coursera **July 2021**
- Virtual unconference ScIC 'Science is cool' conducted by PocketLab- training for science teachers **Apr. 2021**
- Virtual unconference ScIC 'Science is cool' conducted by PocketLab- training for science teachers **Oct. 2020**
- Attended the seminar by IAC: Instrumentation seminars. Application of containerization techniques and software orchestration to implement the control of the NRT telescope. **Nov. 2022**
- Attended the virtual conference 'Ellas y las Estrellas' by the International Astronomical Union and Gruber Foundation **Oct. 2022**
- Attended the seminar by IAC: A tale of caution: the tails of open clusters are much longer than thought but more difficult to find **Oct. 2022**
- Presented a talk on young stellar objects at the Jordanian Astronomical Society⁴ **November 17**
- Astronomy lectures across schools and universities in Jordan **Ongoing**
- Vadim Krushinsky – Acting director of Kourovka Astronomical Observatory, researcher of Laboratory of Astrochemistry, Ural Federal University. Vadim.Krushinsky@urfu.ru
- Svetlana Salii – Ph.D., Assistant Professor at the Department of Astronomy, Geodesy, Ecology, and Environmental Monitoring, senior researcher at Kourovka Astronomical Observatory, Ural Federal University. svetlana.salii@urfu.ru
- Andrei Ostrovskii – Senior lecturer of the Chair of Astronomy, Geodesy, Ecology, and Environmental Monitoring, Ural Federal University. andrei.ostrovskii@urfu.ru
- Anton Vasyunin – Lead researcher of Laboratory of Astrochemistry, Ural Federal University. anton@urfu.ru

³<http://www.sai.msu.ru/seminars/astro.html>

⁴https://web.facebook.com/groups/jas.society/permalink/10160715069801639/?mibextid=S66gvF&_rdc=1&_rdr