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Oguz Han ATAS

Education

2014–2017 **MSc**, *Istanbul University*, Astronomy and Space Sciences, *GPA – 3.66*.

2010–2014 **BSc**, *Istanbul University*, Astronomy and Space Sciences, *GPA – 2.95*.

Masters Thesis

Title *Kinematics of Red Giant Branch Stars*

Supervisors Professor Tansel AK

Description In this study, we've obtained dynamic and kinematic properties of the Milky Way and discussed formation and evolution of the Milky Way.

Experience

Vocational

2021 **Summer School**, National Astronomical Observatory Rozhen, Bulgaria.
First Summer School on Space Research, Technology and Applications for young scientists and PhD students

Detailed achievements:
- During theoretical sessions, we got useful information about astrophysics and cosmology, Sun and space weather, aerospace technologies, scientific instruments and payloads, space communications and essential equipment and earth observations.
- During practical sessions, we worked on working principle of machine learning using Python programming. We performed on data set using that.

2019 **Summer School**, Ege University, Department of Astronomy, Izmir.
1st. Echelle Spectrum Analysing Summer School for graduate student

Detailed achievements:
- With analysing echelle spectrum, we obtained information about doppler imaging, spectral resolution, radial velocity measurement applications and chemical abundance analysis.

2015 **Workshop**, Istanbul University, Department of Astronomy, Istanbul.
Workshop of Galactic Structure.

Detailed achievements:
- Information of basic Milky Way structure via some seminar
- Learned how to download a data on internet and reduction using PYTHON
- Learned how to read data using most of PYTHON module (e.g. PyFits, Pandas, ASCII etc.)

2015 **Workshop**, Erciyes University, Department of Astronomy, Kayseri.
Workshop of Open Cluster.

Detailed achievements:
- Learned how to reduction an CCD image using IRAF
- Finally determined photometric parameters for a star

2014 **Conference**, Istanbul University, Department of Physics, Istanbul.
4th Physics Conference.

Detailed achievements:
- Learned what is the basic Cosmology, Atom and particle Physics, Basic Sciences and Mathematical Physics
- Finally showed what is the contribute on the technology

2013 **Summer School**, Bogazici University, Feza Gursey Institute, Istanbul.
Turkish Astronomical Society - Physics for Astronomers

Detailed achievements:
- Law of force, Laws of thermodynamics, Law of gravity are informed like about basic Physics Law

Project Overview

2016–2017 **Scholarship Student**, TUBITAK.
Photometric Analysis of Open Clusters NGC 2818 and NGC 3603

Detailed achievements:
- Observational analyses gave opportunity to determine sensitive structural and astrophysical parameters as well as provide up-to-date information of clusters for literature.
- I achieved detailed analyses of open star clusters and practice on me.

2017–2018 **Scholarship Student**, BAP - Research Project.
Investigation of age-metallicity relationship with SDSS Data Around the Sun

Detailed achievements:
- In this project, the kinematics and orbital dynamics of the giant stars evolved around the Sun are calculated and the age-metal abundance relationship for the stars around the Sun are investigated.
- I achieved detailed analyses of the giant stars and practice on me.

2018–2020 **PhD Project**, Council of Higher Education.
100/2000 CoHE Doctoral Scholarship Program

Detailed achievements:
- It aims to develop a device for using in the astronomical fields. Also, with this program contributed to knowledge about the charge coupled device (CCD) in the photonics laboratory.

2020–2021 **Scholarship Student**, TUBITAK.
Kinematic Investigation and Mapping of the Solar Neighborhood

Detailed achievements:
- With this project, we analyzed and calculated the kinematic parameters by using very recently observational data.

2021– **Scholarship Student**, TUBITAK.
Investigation of the Scenarios of the Formation and Evolution of the Galaxy with Red Clump Stars

Detailed achievements:
- In this project, we are planning to obtain the initial condition parameters indicating the Milky Way formation.
- Also, it will make a high contribution to the studies of the chemical evolution model of the Milky Way.
- This project enabled for me who will support this study as scholarship to learn detailed analyses of the Milky Way stars and practice on me.

Computer skills

Basic IDL, C++, Java, HTML

Intermediate PYTHON, IRAF, Xspec, LaTeX, Linux, Microsoft Windows, Linux Server

Detailed achievements:
- I am able to know how is working many Astronomical modules on **Python**. Especially I've knowledge how to read big data via Python modules and calculate the statistical parameters. Also, I am able to use multiprocessing to increase rapidity when calculating the parameters simultaneously.
- I've knowledge how to reduction an CCD image with **IRAF** step by step. Especially, I have some experiences to reduction of photometric and spectroscopic CCD image on IRAF.
- I've knowledge what is needed basic stuffs while **observation**. I've been Turkey National Observatory several times during observing for scientific projects.
- I've knowledge how to make an analysis for a high energy source such as AGN with **Xspec** software and **sherpa** application.
- I've knowledge how to get observational or mock data from a database using **SQL** query and I can call the query in **Python**.
- I've knowledge how to use machine learning package on data set in **Python**.

Advanced Computer Hardware and Support

Publications

- **Ataş, O.**; Ak, T., 2019, Galactic metallicity gradient from the Red Giant Stars, Galactic Astronomy Workshop Proceedings Books.
- Kilerci Eser, E.; Goto, T.; Güver, T.; Tuncer, A.; **Atas, , O.**, 2020, H.Infrared colours and spectral energy distributions of hard X-ray selected obscured and Compton-thick active galactic nuclei,MNRAS.