

Rafid H. Dejarah

My Website

✉ rafid.dejarah@gmail.com

📍 Rafid H. Dejarah

EDUCATION

Bachelor of Science in Physics (Honors)
Supervisor: Assoc.Prof. SİNAN KUDAY

Ankara Univesity, Turkey & Lodz University, Poland
September 2022 - Present

RESEARCH INTERESTS

I am working on modified $f(R)$ gravity theories alongside inflationary models and Gravitational waves. I use my excellent machine learning and data analysis abilities while working on the theoretical frameworks.

- I am working with **CGM Research Group** on areas related to $f(R)$ modified gravity theories, especially Hubble tension.
- I am a researcher at COST - European Cooperation in Science and Technology (CA21106) action; Working group 2: WISPs Dark Matter and Cosmology collaboration.
- Currently I am working on several projects related to my fields of interest.

Key words: Cosmology, Theoretical cosmology, modified gravity, $f(R)$ theories, Hubble tension, inflation, Gravitational waves.

RESEARCH PAPERS

[1] N. Bostan and **Rafid H. Dejarah**, *Minimally coupled β -exponential inflation with an r^2 term in the palatini formulation*, 2024.

NOTEBOOKS

- **Rafid H. Dejarah**. Quantum Mechanics; notes for undergraduate students on various quantum mechanics topics.
- **Rafid H. Dejarah**. Our Story, Ankara University, FIZART Scientific Journal.
- **Rafid H. Dejarah**. Notes On Topology; notes for undergraduate students.

CODING SKILLS

Skills: Machine learning & Data Analysis for cosmology.

Languages & frames: Python, C++, Mathematica, L^AT_EX (& Overleaf), Linux OS *Ubuntu 24.04 LTS*, SQL, Git, HTML.

SUMMER SCHOOLS/MEETINGS (*SCHEDULED)

- *COST Action CA21106: 3rd Training School. COST. France. September 2025
- *3rd General Meeting of COST Action: CA21106. COST. Bulgaria. September 2025
- *COST Action CA21106: Working group Meeting. COST. Germany. February 2025
- 2nd General Meeting of COST Action COSMIC WISPs (CA21106). COST. Turkey. September 2024
- Generalized Geometry in Physics and T-duality. Ankara University. Turkey. August 2024
- The Canadian Astroparticle Physics Summer Student Talk competition. Laurentian University Canada. August 2024
- Celestial Holography Summer School 2024. Perimeter Institute. Canada. July 2024
- 50 Years of Horndeski Gravity: Exploring Modified Gravity. Perimeter Institute. Canada. July 2024

WORKSHOPS/PROGRAMS/CONFERENCES ATTENDED (*SCHEDULED)

- *Dark Interactions 2024. Simon Fraser University. *Canada* October 2024
- *Detection and Analysis of Gravitational Waves in the Era of Multi-Messenger Astronomy: From Mathematical Modeling to Machine Learning. Banff International Research Station. *Canada* November 2024
- Causalworlds conference. Perimeter Institute. *Canada* September 2024
- Quantum Gravity on the computer 2.0. Friedrich Schiller University Jena. *Germany* September 2024
- Black Holes Inside and Out. Niels Bohr Institute . *Denmark* August 2024
- On The Mechanism of the Universe. Ankara University. *Turkiye* May 2024
- CERN's 70th Anniversary: The Turkish-CERN research collaboration. *Turkey* May 2024
- SSERD Asteroid Hunting Program. SSERD. *India* November 2023 - February 2024
- The International Student Internship Program.YTB. *Turkey* May - August 2024

- Physics Days. Ankara University. *Turkey* May 2023
- International Max Planck Research School (IMPRS) 16th Conference. Max Planck Institute. *Germany* March 2023
- Computational Cognition & Machine Intelligence Program Review. AFSOR. *USA* November 2022
- Trust & Influence Program Review. AFOSR. *USA* September 2022
- CMQM (Condensed Matter and Quantum Materials). Institute of Physics (IOP). *UK* July 2022
- Space Science Program Review. AFOSR. *USA* January 2022
- NASA Artemis Generation Program. NASA. *USA* October - November 2021
- Quantum Matter at Ultra-low Temperatures. Insitute of Physics (IOP). *UK* June 2021
- XIX International Workshop on Neutrino Telescopes. University of Padova. *Italy* February 2021
- NASA Mars Program. NASA. *USA* November 2020 - February 2021
- SSERD Outreach Program. SSERD. *India* September 2020
- Citizen Science Projects. NASA. *USA* September 2021 - Present

SELECTED AWARDS AND **HONORS**

- Erasmus+ grant September 2023
- Discovery of Asteroid named "rafid001" November 2023
- YTB-IsDB Scholarship August 2021
- First Place at iTelligent Classes Competition (Ar-Rasheed Schools) March 2020

INVITED ACADEMIC AND PUBLIC **TALKS** (*SCHEDULED)

- ***COST Action 21106: Journal Club** COST, Belgium
To give a talk titled "Minimally coupled β -exponential inflation with an R^2 term in the Palatini formulation" 2025
- **Laurentian University** Sudbury, Canada
Gave a talk titled "Further analysis in metric-affine $f(R)$ Gravity" in The Canadian Astroparticle physics Summer Student Talk (CASST) competition. 2024
- **Ankara University** Ankara, Turkiye
Invited to give a talk about my Erasmus+ experience in the European Day. 2024

LANGUAGES

- **English:** *Native*, **Arabic:** *Bilingual*, **Turkish:** *Proficient*, **Polish:** *Intermediate* .

REFERENCE

Dr. Hasan Maridi

- Research Fellow at Nuclear Physics Group, Department of Physics and Astronomy, the University of Manchester, M13 9PL Manchester, UK (Cara fellowship). Room 4.13 Schuster Laboratory.
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