

# Alireza Jamali

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Tehran, IRAN

- EDUCATION**      **Honours (four-year) Bachelor of Science**, Mathematics  
Tehran Polytechnic (Amirkabir University of Technology), class of 2020
- Honours Diploma**, Mathematical Physics  
Nemoone Azadegan Highschool of Science, October 2016  
GPA: 19.84/20
- RESEARCH EXPERIENCE**      **On Einstein Field Equations and their alternatives**      Ongoing  
I am working under the guidance of Professor Christian Böhmer at UCL on some natural questions surrounding General Theory of Relativity. Questions like: how can one motivate the Einstein field Equations? Why this particular form? What are natural alternatives? etc.  
I had a two-month stay there at UCL in summer 2019 to work more efficiently.
- TEACHING EXPERIENCE**      **Lecturer**      Autumn 2019  
Mathematical Quantum Mechanics  
Department of Physics, Tehran Polytechnic
- Teaching Assistant**      Autumn 2018  
Foundations of Analysis Course, Instructor: Dr. Mehdi Rostami  
Department of Mathematics, Tehran Polytechnic
- AWARDS AND ACHIEVEMENTS**      International Students Dean's Summer Student Scholar, University College London (UCL), (2019)  
Full mark (20/20) in Mathematics and Physics Nationwide Highschool Final Examinations (2015 & 2016)
- RESEARCH INTERESTS**
- Foundations of Quantum Mechanics
  - Most areas of Mathematical Physics
  - Quantum Gravity
  - General Relativity
  - Astroparticle physics
  - Philosophy of Science
- SELF-STUDIED SUBJECTS**
- **Mathematical Analysis**
  - **Linear Algebra**
  - **Probability**
  - **Abstract Algebra**
  - **Complex Analysis**
  - **General Topology**
  - **Introductory Manifolds**

- **Differential Geometry**
- **Fourier Analysis**
- **PDEs**
- **Calculus of Variations**
- **Classical Mechanics**
- **Electromagnetism**
- **Special Relativity**
- **General Relativity**
- **Quantum Mechanics**

#### **LANGUAGES**

- **Persian** Native Language
- **English** Fluent
- **Français** Intermediate

#### **REFERENCES**

**Christian Böhmer**, Reader in Mathematics, University College London, c.boehmer@ucl.ac.uk

**Julian Barbour**, Independent Researcher - Visitor Lecturer, University of Oxford, julian.barbour@physics.ox.ac.uk

**Mehdi Rostami**, Assistant Professor in Mathematics, Tehran Polytechnic (Amirkabir University of Technology), mross@aut.ac.ir

**Houshyar Noshad**, Professor in Physics, Tehran Polytechnic (Amirkabir University of Technology), hnoshad@aut.ac.ir