

# Ahad Khaleghi Ardabili

Altınbaş University  
Faculty of Engineering and Natural Sciences  
Mahmutbey Dilmenler Caddesi, No:26 34217  
Bağcılar-Istanbul  
Turkey

Email: ahad.ardabili@altinbas.edu.tr

## Education

- Ph.D. Physics, Koç University, Istanbul, Turkey 2008–2014
- M.S. Physics, Shahid Beheshti University, Tehran, Iran 2006–2008
- B.S. Physics, Qom University, Qom, Iran 2001–2004

## Work Experience

- Assistant Professor, Altınbaş University, Istanbul, Turkey, 2017–present
- Postdoctoral Research Fellow, “Quantum Fuel for Space Applications” Koç University, 2014–2017, PI: Professor Özgür E. Müstecaplıoğlu
- Teaching Assistant, Department of Physics, Koç University 2008–2013
- Teaching Assistant, Department of Physics, Qom University 2004–2006

## Research Experience

- PhD Dissertation: "Z<sub>2</sub> Topological Insulators and The Quantum Spin Hall Effect on Triangular Optical Lattices"  
Supervisor: Professor Tekin Derlei, Co-advisor: Professor Özgür E. Müstecaplıoğlu
- Master's Thesis: "Scalar Tensor Theories in Cosmology"  
Supervisor: Professor Hamid Reza Sepangi
- Undergraduate Research Project: "General Relativity and Gravity Probe B Mission"  
Supervisor: Professor Habibollah Razmi

### Current Projects:

- Machine-learning applications and data analysis for physics
- Interdisciplinary data analysis and visualization project with social scientists

## Awards & Scholarships

- Koç University, Postdoctoral Research fellowship project supported by Lockheed Martin (May 2016- September 2017)
- Koç University, Postdoctoral Research fellowship project supported by TUBITAK (2014–2016)
- Koç University, PhD Research fellowship project supported by TUBITAK (2013–2014)
- Koç University PhD scholarship, 2008–2013
- Best Teaching Assistant of Department of Physics, Koç University, 2012
- 71st among more than 6000 participants in the national entrance exam for graduate studies in Iran, 2006

## Papers

- K. Atazadeh, **A. Khaleghi**, H. R. Sepangi, and Y. Tavakoli, Energy conditions in f(R) gravity and Brans-Dicke theories, Int. J. Mod. Phys. D 18, 1101 (2009)
- **K. Ardabili**, T. Dereli, and Özgür E. Müstecaplıoğlu, "Z<sub>2</sub> Topological insulator of ultra-cold atoms in bichromatic optical lattices" , Physica B, 451 :1 , (2015 )

- **K. Ardabili**, T. Dereli, and Özgür E. Müstecaplıoğlu, "A tight binding model for quantum spin Hall effect on triangular optical lattice", arXiv:1401.3179

## Talks and Posters

- "Üçgen-sel optik ağlar üstünde Z<sub>2</sub>-topolojik yalıtkanlar ve kuantum spin Hall etkisi" at Istanbul University, February 2016
- "Z<sub>2</sub> topological insulator of ultra-cold atoms in bichromatic optical lattices" at the Young Atomic Optician Conference, Barcelona, April 2014
- "Topological Insulators" at Middle East Technical University, Ankara, March 2014
- "Tight-binding model and analysis of Z<sub>2</sub> topological insulators in ultracold atomic gases" at 22nd International Laser Physics Workshop, Prague, Czech, July 2013
- "Z<sub>2</sub> topological insulator of ultra-cold atoms in bichromatic optical lattices" at March Meeting, American Physical Society, Baltimore, USA, March 2013
- "Interdisciplinary Workshop on Topological States of Matter" in Freiburg, Germany, March 2012
- "Aspect of Topology in Modern Condensed Matter Physics" in Tbilisi, Georgia, November 2012

## Languages

Persian: native  
English: advanced  
Turkish: advanced  
Azerbaijani: native  
German: intermediate

## Programming Languages

Matlab, Mathematica, Python, Julia, c++, R

## References

Prof. Dr. Tekin Dereli, Physics department, Koç University, Sariyer, Istanbul, Turkey  
Email: tdereli@ku.edu.tr

Prof. Dr. Özgür E. Müstecaplıoğlu, Physics department, Koç University, Sariyer, Istanbul, Turkey  
Email: omustecap@ku.edu.tr

Prof. Dr. Hamid Reza Sepangi, Physics department, Shahid Beheshti University, Tehran, Iran  
Email: hr-sepangi@sbu.ac.ir

Associate Prof. Dr. Shahram Jalazadeh, Physics department, Shahid Beheshti University, Tehran, Iran  
Email: s-jalazadeh@sbu.ac.ir