

## **Asst. Prof. AHMET KELEŞ**

### **Personal Information**

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### **International Researcher IDs**

ScholarID: FFeTY-0AAAAJ

ORCID: 0000-0002-9367-3903

Publons / Web Of Science ResearcherID: U-2932-2018

ScopusID: 23004875700

Yoksis Researcher ID: 325453

### **Education Information**

Doctorate, University of Washington, College of Arts & Sciences, Department of Physics, United States Of America 2009 - 2014

Postgraduate, Ihsan Dogramaci Bilkent University, Faculty Of Science, Department Of Physics, Turkey 2007 - 2009

Undergraduate, Ihsan Dogramaci Bilkent University, Faculty Of Science, Department Of Physics, Turkey 2002 - 2007

### **Dissertations**

Doctorate, Transport properties of chiral p-wave superconductor-normal metal nanostructures, University of Washington, College of Arts & Sciences, Department of Physics, 2014

Postgraduate, Rotating two leg Bose Hubbard ladder, Ihsan Dogramaci Bilkent University, Faculty Of Science, Department Of Physics, 2009

### **Research Areas**

Quantum fluids and solids, Electronic structure of bulk material, Magnetic Properties and Materials, Superconductivity

### **Academic Titles / Tasks**

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2020 - Continues

Researcher, The University of Pittsburgh, 2014 - 2019

Researcher, George Mason University, 2014 - 2019

Research Assistant, University of Washington, Collage of Arts and Science, Department of Physics, 2009 - 2014

Research Assistant, Ihsan Dogramaci Bilkent University, Faculty Of Science, Department Of Physics, 2007 - 2009

### **Courses**

## Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Pairing from repulsion in a two-dimensional Fermi gas with soft-core interactions**  
Keleş A., Li X., Zhao E.  
PHYSICAL REVIEW B - CONDENSED MATTER AND MATERIALS PHYSICS, vol.109, no.5, pp.1-9, 2024 (SCI-Expanded)
- II. **Vortex lattices in strongly confined quantum droplets**  
YOĞURT T. A., TANYERİ U., KELEŞ A., Oktel M.  
Physical Review A, vol.108, no.3, 2023 (SCI-Expanded)
- III. **Polarized Rabi-coupled and spinor boson droplets**  
YOĞURT T. A., KELEŞ A., Oktel M.  
Physical Review A, vol.107, no.2, 2023 (SCI-Expanded)
- IV. **Neural-network quantum states for a two-leg Bose-Hubbard ladder under magnetic flux**  
Çeven K., Oktel M. Ö., Keleş A.  
PHYSICAL REVIEW A, vol.106, no.6, 2022 (SCI-Expanded)
- V. **Dimers, trimers, tetramers, and other multimers in a multiband Bose-Hubbard model**  
Iskin M., KELEŞ A.  
Physical Review A, vol.106, no.4, 2022 (SCI-Expanded)
- VI. **Stability of (N+1) -body fermion clusters in a multiband Hubbard model**  
Iskin M., KELEŞ A.  
Physical Review A, vol.106, no.3, 2022 (SCI-Expanded)
- VII. **Spinor boson droplets stabilized by spin fluctuations**  
YOĞURT T. A., KELEŞ A., Oktel M. Ö.  
Physical Review A, vol.105, no.4, 2022 (SCI-Expanded)
- VIII. **Rise and fall of plaquette order in the Shastry-Sutherland magnet revealed by pseudofermion functional renormalization group**  
KELEŞ A., Zhao E.  
PHYSICAL REVIEW B, vol.105, no.4, 2022 (SCI-Expanded)
- IX. **f-wave superfluidity from repulsive interaction in Rydberg-dressed Fermi gas**  
Keles A., Zhao E., Li X.  
PHYSICAL REVIEW A, vol.101, no.2, 2020 (SCI-Expanded)
- X. **Scrambling dynamics and many-body chaos in a random dipolar spin model**  
Keles A., Zhao E., Liu W. V.  
PHYSICAL REVIEW A, vol.99, no.5, 2019 (SCI-Expanded)
- XI. **Weyl nodes in periodic structures of superconductors and spin-active materials**  
Keles A., Zhao E.  
PHILOSOPHICAL TRANSACTIONS OF THE ROYAL SOCIETY A-MATHEMATICAL PHYSICAL AND ENGINEERING SCIENCES, vol.376, no.2125, 2018 (SCI-Expanded)
- XII. **Renormalization group analysis of dipolar Heisenberg model on square lattice**  
Keles A., Zhao E.  
PHYSICAL REVIEW B, vol.97, no.24, 2018 (SCI-Expanded)
- XIII. **Absence of Long-Range Order in a Triangular Spin System with Dipolar Interactions**  
Keles A., Zhao E.  
PHYSICAL REVIEW LETTERS, vol.120, no.18, 2018 (SCI-Expanded)
- XIV. **Effective theory of interacting fermions in shaken square optical lattices**  
Keles A., Zhao E., Liu W. V.  
PHYSICAL REVIEW A, vol.95, no.6, 2017 (SCI-Expanded)
- XV. **Competing many-body instabilities in two-dimensional dipolar Fermi gases**

- Keles A., Zhao E.  
PHYSICAL REVIEW A, vol.94, no.3, 2016 (SCI-Expanded)
- XVI. **Mott transition in a two-leg Bose-Hubbard ladder under an artificial magnetic field**  
Keles A., Oktel M. O.  
PHYSICAL REVIEW A, vol.91, no.1, 2015 (SCI-Expanded)
- XVII. **Theory of disordered unconventional superconductors**  
Keles A., Andreev A. V., Spivak B. Z., Kivelson S. A.  
JOURNAL OF EXPERIMENTAL AND THEORETICAL PHYSICS, vol.119, no.6, pp.1109-1114, 2014 (SCI-Expanded)
- XVIII. **Vortex lattices in dipolar two-component Bose-Einstein condensates**  
Ghazanfari N., Keles A., Oktel M. O.  
PHYSICAL REVIEW A, vol.89, no.2, 2014 (SCI-Expanded)
- XIX. **Electron transport in p-wave superconductor-normal metal junctions**  
Keles A., Andreev A. V., Spivak B. Z.  
PHYSICAL REVIEW B, vol.89, no.1, 2014 (SCI-Expanded)
- XX. **Ground-state properties, vortices, and collective excitations in a two-dimensional Bose-Einstein condensate with gravitylike interatomic attraction**  
Keles A., Sevincli S., Tanatar B.  
PHYSICAL REVIEW A, vol.77, no.5, 2008 (SCI-Expanded)
- XXI. **Ground-state properties and collective excitations in a 2D Bose-Einstein condensate with gravity-like interatomic attraction**  
Keles A., Sevincli S., Tanatar B.  
JOURNAL OF LOW TEMPERATURE PHYSICS, vol.150, pp.630-635, 2008 (SCI-Expanded)

## Scientific Refereeing

PHYSICAL REVIEW LETTERS, SCI Journal, October 2018  
PHYSICAL REVIEW LETTERS, SCI Journal, September 2018

## Metrics

Publication: 21  
Citation (WoS): 113  
Citation (Scopus): 68  
H-Index (WoS): 6  
H-Index (Scopus): 4