

Prof. SADİ TURGUT

Personal Information

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International Researcher IDs

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Publons / Web Of Science ResearcherID: A-6589-2010

ScopusID: 7004835080

Yoksis Researcher ID: 46196

Education Information

Doctorate, University of California, Berkeley, Graduate School, Physics, United States Of America 1989 - 1995

Undergraduate, Middle East Technical University, Fen Edebiyat, Fizik, Turkey 1985 - 1989

Foreign Languages

English, C1 Advanced

Dissertations

Doctorate, Impurity effects in charge-density-wave systems, University Of California, Berkeley, Graduate School, Physics, 1995

Research Areas

Physics, Intensive Article 2: Electronic Structure, Electric, Magnetic and Optical Properties, Electronic transport in condensed matter, Natural Sciences

Academic Titles / Tasks

Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2014 - Continues

Associate Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2011 - 2014

Assistant Professor, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2004 - 2011

Lecturer, Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 1996 - 2004

Academic and Administrative Experience

Middle East Technical University, Faculty of Arts and Sciences, Department of Physics, 2012 - 2016

Advising Theses

TURGUT S., Demonstration of quantum contextuality via Hardy Paradox, Postgraduate, Y.YOLSEVER(Student), 2022
TURGUT S., Quantum information approach to correlations in many-body systems, Doctorate, Ç.AKSAK(Student), 2022
TURGUT S., Security of quantum key recycling, Postgraduate, K.AKYÜZ(Student), 2022
TURGUT S., Quantum search in sets with prior knowledge, Postgraduate, U.ÇALIKYILMAZ(Student), 2021
TURGUT S., Nonlinearities in quantum correlations of two time-like separated measurements, Postgraduate, H.GHARIB(Student), 2021
TURGUT S., Thermal rectification behaviour of some small quantum systems, Postgraduate, S.ATILAY(Student), 2021
TURGUT S., Discrimination of quantum states under local operations and classical communication, Postgraduate, Ö.GÜNGÖR(Student), 2015
TURGUT S., Bell-like inequalities in quantum information theory, Postgraduate, Z.CAN(Student), 2015
TURGUT S., Weight discrimination of boolean functions with quantum computation, Doctorate, K.UYANIK(Student), 2014
TURGUT S., Transformations of entangled mixed states of two qubits, Postgraduate, Ü.ALKUŞ(Student), 2013
TURGUT S., Landauer erasure for quantum systems, Postgraduate, Ç.AKSAK(Student), 2009
TURGUT S., Entanglement transformations, Postgraduate, S.KINTAŞ(Student), 2009
TURGUT S., Quantum decoherence and quantum state diffusion formalism, Postgraduate, C.KADRİ(Student), 2007
TURGUT S., Ratchet effect in mesoscopic systems, Postgraduate, U.YİĞİT(Student), 2005
TURGUT S., A continuum model for decoherence in 1D transport, Postgraduate, S.ŞENOZAN(Student), 2005
TURGUT S., Thermoelectric effects in mesoscopic physics, Doctorate, M.ALİ(Student), 2004
TURGUT S., Thermoelectric effects in mesoscopic physics, Doctorate, M.Ali(Student), 2004

Published journal articles indexed by SCI, SSCI, and AHCI

- I. **Witnessing pairing correlations in identical-particle systems**
Aksak C., TURGUT S.
Quantum Information and Computation, vol.21, no.15-16, pp.1307-1319, 2021 (SCI-Expanded)
- II. **Entanglement-assisted state discrimination and entanglement preservation**
Gungor O., TURGUT S.
PHYSICAL REVIEW A, vol.94, no.3, 2016 (SCI-Expanded)
- III. **An elementary derivation of the quantum virial theorem from Hellmann-Feynman theorem**
İPEKOĞLU Y., TURGUT S.
EUROPEAN JOURNAL OF PHYSICS, vol.37, no.4, 2016 (SCI-Expanded)
- IV. **Spin-orbit effects on the nonlinear optical properties of a quantum dot in simultaneous electric and magnetic fields**
AYTEKİN Ö., TURGUT S., TOMAK M.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.64, pp.29-32, 2014 (SCI-Expanded)
- V. **Nonlinear optical properties of a Woods-Saxon quantum dot under an electric field**
AYTEKİN Ö., TURGUT S., Unal V. U., Aksahin E., TOMAK M.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.54, pp.257-261, 2013 (SCI-Expanded)
- VI. **A new sure-success generalization of Grover iteration and its application to weight decision problem of Boolean functions**
Uyanik K., TURGUT S.
QUANTUM INFORMATION PROCESSING, vol.12, no.11, pp.3395-3409, 2013 (SCI-Expanded)
- VII. **Nonlinear optical properties of a Poschl-Teller quantum well under electric and magnetic fields**
AYTEKİN Ö., TURGUT S., Tomak M.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.44, pp.1612-1616, 2012 (SCI-Expanded)
- VIII. **Gauge covariance and spin-current conservation in the gauge-field formulation of systems with spin-orbit coupling**
SHIKAKHWA M., TURGUT S., PAK N. K.

JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.45, no.10, 2012 (SCI-Expanded)

- IX. **Environmental effects on the geometric phase**
GÜNHAN A. C., TURGUT S., PAK N. K.
EUROPEAN PHYSICAL JOURNAL D, vol.64, no.1, pp.155-162, 2011 (SCI-Expanded)
- X. **A continuum model for dephasing in mesoscopic systems**
Şenozan S., TURGUT S., Tomak M.
PHYSICA E-LOW-DIMENSIONAL SYSTEMS & NANOSTRUCTURES, vol.43, no.10, pp.1845-1852, 2011 (SCI-Expanded)
- XI. **Heat transfer operators associated with quantum operations**
AKSAK Ç., TURGUT S.
JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.44, no.27, 2011 (SCI-Expanded)
- XII. **Derivation of the magnetization current from the non relativistic Pauli equation A comment on The quantum mechanical current of the Pauli equation by Marek Nowakowski Am J Phys 67 10 916 1999**
SHIKAKHWA M., TURGUT S., PAK N. K.
American Journal Of Physics, vol.79, pp.1177, 2011 (SCI-Expanded)
- XIII. **Transformations of W-type entangled states**
Kintas S., Turgut S.
JOURNAL OF MATHEMATICAL PHYSICS, vol.51, no.9, 2010 (SCI-Expanded)
- XIV. **Geometric measures of entanglement**
UYANIK K., TURGUT S.
PHYSICAL REVIEW A, vol.81, no.3, 2010 (SCI-Expanded)
- XV. **Deterministic transformations of multipartite entangled states with tensor rank 2**
TURGUT S., GÜL Y., PAK N. K.
PHYSICAL REVIEW A, vol.81, no.1, 2010 (SCI-Expanded)
- XVI. **Relations between entropies produced in nondeterministic thermodynamic processes**
TURGUT S.
PHYSICAL REVIEW E, vol.79, no.4, 2009 (SCI-Expanded)
- XVII. **FIGURE OF MERIT OF ONE DIMENSIONAL RESONANT TRANSMISSION SYSTEMS IN THE QUANTUM REGIME**
ÇİPİLOĞLU M. A., TURGUT S.
Mathematical Applications, vol.14, pp.13-19, 2009 (SCI-Expanded)
- XVIII. **Catalytic transformations for bipartite pure states**
TURGUT S.
JOURNAL OF PHYSICS A-MATHEMATICAL AND THEORETICAL, vol.40, no.40, pp.12185-12212, 2007 (SCI-Expanded)
- XIX. **Nonlinear Seebeck and Peltier effects in quantum point contacts**
Çipiloğlu M. A., TURGUT S., Tomak M.
PHYSICA STATUS SOLIDI B-BASIC SOLID STATE PHYSICS, vol.241, no.11, pp.2575-2585, 2004 (SCI-Expanded)
- XX. **Half plateaus in the linear thermal conductance of quantum point contacts**
ÇİPİLOĞLU M. A., TURGUT S.
JOURNAL OF PHYSICS-CONDENSED MATTER, vol.16, no.21, pp.3671-3679, 2004 (SCI-Expanded)
- XXI. **PHENOMENOLOGICAL GINZBURG-LANDAU THEORY OF CHARGE-DENSITY-WAVE SPECTRA**
TURGUT S., Falicov L. M.
PHYSICAL REVIEW B, vol.50, no.12, pp.8221-8229, 1994 (SCI-Expanded)
- XXII. **Theory of impurity induced lattice distortions in the normal phase of charge density wave systems**
TURGUT S., Falicov L. M.
PHYSICAL REVIEW B, vol.49, pp.14043-14046, 1994 (SCI-Expanded)

Publication: 22
Citation (WoS): 267
Citation (Scopus): 210
H-Index (WoS): 9
H-Index (Scopus): 8

Non Academic Experience

METU
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