**Last Name** **Terzis**
**First Name** **Andreas**
**Employment/Occupation** Professor, Physics Dept., University of Patras, Greece
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**Education:** B.S. in Physics (9,34/10), Physics Dept., University of Patras, 1985.
Graduate studies in Physics (4/4), State University of New York at Buffalo, Buffalo, New York, U.S.A., 1986 –1989.
P.h.D. in Physics, Physics Dept., University of Patras, 1991.

**Employment/Occupation:**

- Postdoctoral position, Chemistry Dept., University of North Carolina at Chapel Hill, 1994-1995.
- Postdoctoral position (scholarship from the Greek State Scholarship Foundation), Physics Dept., University of Patras, Greece, 1996-1997.
- Postdoctoral position, Chemical Engineering Dept., University of Patras, 1998-2000.
- Lecturer (2000-2005), Assistant (2005-2009), Associate Professor (2009-2014) and Professor (2014 to present) Physics Dept., University of Patras, Greece.

## Teaching

**Undergraduate courses**, Physics III, Introduction to Programming (Fortran), Linear Algebra, Computer Simulations in Statistical Physics, Mechanics of the Continuous Medium, Special Relativity, Quantum Mechanics I, Quantum Mechanics II, General Relativity.
**Undergraduate Labs**, Physics & Astronomy, Fortran, Electromagnetisms, Atomic and Nuclear Physics.
**Graduate courses**, Thermodynamics of polymers, Statistical Physics of macromolecules, Statistical Physics, Special topics in Statistical Physics, Quantum Mechanics, Classical Electrodynamics.

## Publication and Citation report

1. around 110 published papers in refereed scientific journals and books,
2. more than 4000 citations by other researchers,
3. h-index: 33

## Research Activity

**Research Field(s):**

1. Nanosciences, nanotechnologies, materials & new production technologies
2. Information & communication technologies

**Keywords:**
Condense matter physics. Low dimensional theoretical and computational solid state physics. Complex fluids computational physics. Theoretical polymer physics.

**Research activity:**
Theoretical and computational studies in: Condense matter physics. Liquid crystals and mesophases. Polymer physics of dendrimers, brushes, star polymers and polymeric solutions. Static and dynamic properties of low dimensional quantum systems (quantum dots, wires and wells). Coherent control in semiconductor nanostructures with optoelectronic applications. Coherent control in semiconductor nanostrutures with applications in quantum computation (creation of entangled states and quantum gates).

**Selected research projects:**

1. Research Project K. Karatheodoris 'Theoretical and computational study of Nanostructures with applications in quantum computers', Research Committee, University of Patras. Project leader. (2009-present).
2. Research Project PENED03 'Study of external pressure on the morphology and dynamics of industrially produced polypropylene', Ministry of Development. University of Patras coordinator. (2006-present).
3. Research Project Pythagoras II 'Controlled Dynamics of Nanostructures and Applications in Quantum Computation', Ministry of Education and Religion. Main investigator. (2005-2008).

**Selected (most representative and most cited) publications:**

- Effects of excitons in nonlinear optical rectification in semi-parabolic Quantum Dots, Sotirios Baskoutas, Emmanuel Paspalakis and Andreas F. Terzis,
  *Physical Review B,* 74, 153306 (2006).
- Electronic structure and nonlinear optical rectification in a quantum dot: effects of impurities and external electric field
  Sotirios Baskoutas, Emmanuel Paspalakis and Andreas F. Terzis,
  *J. Phys.: Condens. Matter* **19**, 395024(2007).
- Size-dependent band gap of colloidal quantum dots.
  S. Baskoutas and A.F. Terzis.
  *Journal of Applied Physics*, **99**, 013708(2006).
- Optical susceptibility in singly charged ZnO colloidal quantum dot embedded in different dielectric matrices
  Zaiping Zeng, E. Paspalakis, C. Garoufalis, Andreas F. Terzis, and Sotirios Baskoutas,
  *Journal of Applied Physics*, **113**, 054303(2013).
- Controlled rotation in a double quantum dot structure.
  E. Paspalakis, Z. Kis, E. Voutsinas and A.F. Terzis
  *Physical Review B,* **69**, 155316 (2004).
- Entanglement in a two-qubit Ising model under a site-dependent external magnetic field
  A.F. Terzis and E. Paspalakis
  *Physics Letters A*, **333**, 438(2005).
- Variable density self consistent field study on bonded polymer layer around spherical nanoparticles
  G. Kritikos and A.F. Terzis.
  *European Polymer Journal*, **49**, 613(2013).
- Shape-dominated ordering in nematic solvents. A deuterium NMR study of cycloalkane solutes
  A.F. Terzis, C.-D. Poon, E.T. Samulski, Z. Luz, R. Poupko, H. Zimmermann, K. Muller, H. Toriumi, and *D*.J. Photinos
  *Journal of the American Chemical Society*, **118**, 2226(1996).
- Magnetoexciton spectrum of GaAs-AlAs quantum wells
  D.D. Smith, M. Dutta, X.C. Liu, A.F. Terzis, A. Petrou, M.W. Cole, and P.G. Newman
  *Physical Review* B, **40**, 1407 (1989).
- A simple relativistic Bohr atom
  Andreas F. Terzis,
  *European Journal of Physics*, **29**, 735(2008).