



Professor Theodore E. Matikas

Research interests: Development of smart sensors and 3D flexible electronics. 3D-digital documentation and evaluation of cultural heritage monuments using nondestructive, virtual, augmented and mixed reality technologies. Smart packaging and agri-food safety. CBRNE security. Nondestructive evaluation and Structural Health Monitoring. Development of advanced characterization methods for quantification of damage and life prediction of engineering materials and systems in aerospace, energy, and civil infrastructure applications. Environmental degradation of aging structures. Development of novel materials and advanced damage characterization techniques in metal and ceramic matrix composites, nano-structured materials, coatings, multi-functional, hybrid, and smart materials, biomaterials, cementitious materials.

Education

- Ph.D., Solids and Structures, Mechanical Engineering Dept, Université de Technologie de Compiègne (UTC), France (1991).
- D.E.A., Applied Mechanics and Materials Engineering, Mechanical Engineering Department, UTC, France (1987)
- D.E.A., Philosophy, Université Paris I – Sorbonne, France (1984)
- B.Sc., Physics, Aristotle University of Thessaloniki, Greece (1983)



Recent Positions at the University of Ioannina (UOI)

- Vice-rector for Research, Innovation and Development and Chairman of the Research Committee – Special Account for Research Funds, UOI (since 2023).
- Professor of Mechanical Behavior of Surfaces and Interfaces, Department of Materials Science Engineering (TMEY), UOI (since 2009) and Assoc. Professor TMEY, UOI (2006-2008).
- Director of the Mechanics, Smart Sensors and Nondestructive Evaluation (MSS-NDE) Laboratory, UOI (since 2006).
- Supervised: >120 diploma theses, >50 master's theses, 18 doctoral theses.

Other Professional Experience

- Director for Regulatory Policy, Special Scientist A' of GAEC (2000-2005).
- Professor, Chemical and Materials Engineering Department, University of Dayton, Ohio, USA and Director of the Center for Materials Diagnostics, UDRI/DARPA US DoD (1997-1999).
- Research Engineer, US Air Force Research Laboratory, Wright-Patterson Air Force Base, Dayton, Ohio, responsible for the entire US Air Force research program in nondestructive evaluation of aerospace systems (1991-1997).

Publications and Bibliometric Data

- Publications: >80 US DoD classified research reports (1993-1999), >300 publications in peer-reviewed scientific journals and International Conference Proceedings, 8 book chapters, 6 patents, >250 presentations at International Conferences (> 80 invited lectures).
- Citations: >6,500, h-index: 40, i10-index: 113  *Highly Ranked Scholar – Lifetime*  *Powering Scholarly Analytics*
- Included in the lists of "World's Top 2% Scientists" as published by Stanford University, both for *career-long* and *single-year* impact.

Awards: Wohlleben/Hochwal Award and Certificate of Merit for Excellence in Research (1995 and 1999), US National Academy of Science & Engineering/National Research Council Award (1992), European Commission/CNRS-France Research Fellowship (1987).

Research Projects: Principal Investigator in several competitive research programs (with a total budget of >30M€) funded by: US National Science Foundation, US Defense Advanced Research Projects Agency – DARPA, European Commission, and Greek national funding bodies.

- Reviewer of European research programs (among others, vice-chairman for the evaluation of Horizon 2020 FET-OPEN projects, ERC Starting, Consolidator and Advanced Grants, etc.)

Other Professional/Administrative Experience

- Member of the Sectoral Scientific Council for Engineering Sciences of the National Research, Technology, and Innovation Council (ESETEK), which is the highest State advisory body in Greece, for matters of research and innovation (since 2020).
- Special Advisor to the UN/IAEA DG, member of the prestigious AdSec Group, responsible, among others, to guide the UN on developing policy and priorities in the field of Nuclear Security and to oversee its world-wide implementation (since 2014).
- Senior Expert of the Office of Internal Oversight Services (OIOS) of the UN/IAEA that provides objective, independent and systematic assessments to ensure accountability and sound governance of the UN to Member States (since 2018).
- Independent International Senior Expert of the International Atomic Energy (IAEA/UN) (since 2003) with participation to more than 180 Special Missions across the globe, including several peer review missions.
- Member of the Board of Directors of the Greek Atomic Energy Commission – GAEC (independent regulatory authority for the fields of ionizing and non-ionizing radiation) (2008-2015).
- Chairman of the Drafting Committee of Civil Protection plans of the Ministry of Development and its supervised Agencies (Government Gazette 107/12-12-2006)
- Member of the Board of Directors of the European Supply Agency (Euratom), European Union (2002 – 2006).
- National expert for FP6 Aeronautics and Space (2004 – 2006) and FP7 (Euratom) (2006-2010).
- Chairman of the Mechanical Engineering Department, University of Ioannina (2019 – 2022).
- Chairman and member of the organizing committees of international conferences and Academic Editor of scientific journals (Applied Physics, Metals, Materials, Acoustics, Nanotechnology, Sensors, etc.)