



Prof. Kakaras Emmanuel

Dr. Mechanical Engineer

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Education:

- 1989: PhD, National Technical University of Athens / Institut für Wärme und Brennstofftechnik T.U. Braunschweig, Greece - Germany
- 1984: Mechanical Engineer, National Technical University of Athens, Greece

Academic rank and present research position:

- July 2001 - date: Associate Professor, NTUA, Greece
- April 1999 - date: Director, Institute for Solid Fuels Technology & Applications (ISFTA), Center for Research and Technology (CERTH), Greece
- January 1996: Assistant Professor, NTUA, Greece
- December 1991: Lecturer, NTUA, Greece

Research areas:

- Methods for improving the efficiency of Fossil-fueled Power Stations
- New technologies in solid fuel exploitation for energy production (IGCC-PFBC) – Fluidised-bed combustion
- CO₂ sequestration and storage
- Combustion of pulverized brown coal in the furnaces of large-scale Power Plants – Effects of the fuel quality and the combustion system SO₂ and incombustible NO_x emissions, on efficiency and on plant availability
- Utilisation of alternative fuel sources (biomass and waste) for energy production

- Utilisation of natural gas – Cogeneration – Fuel cells
- Radiative heat transfer in furnaces – Behaviour of deposits and heat transfer

Distinctions:

- 1988: EEC's sectoral grandee (DG XII)
- 1985-1988: NTUA's postgraduate bursar
- A. S. Onassis' Public Benefit Foundation's bursar
- Distinctions for excellence in all grades of secondary education

Membership of professional bodies:

- Member of the Verein Deutscher Ingenieure-Gesellschaft Energietechnik (VDI-GET)
- Member of the Combustion Institute (USA) as well as founder and member of its Greek section
- Member of the American Society of Mechanical Engineers (ASME)
- Member of COGEN - Hellas
- Member of the Scientific Council of VGB (Large Plant Operators)
- Member of the Technical Chamber of Greece

Common administrative duties:

- Member of the Ad hoc Senatorial Committee of Laboratories
- Member of the Ad hoc Senatorial Committee of Energy and Environmental Management
- Substitute member of NTUA's Research Committee
- Member of the Ad hoc Interdepartmental Committee of the Interdepartmental Master's Programme in Energy Production and Management

Teaching at NTUA:

Undergraduate courses (Mechanical Engineering studies):

- Steam Boilers I and Lab.
- Steam Boilers II
- Pollution prevention technology of thermal power plants

Postgraduate courses (Inter departmental master studies: Energy generation and management):

- Thermal Power Plants (As course coordinator)
- Fuels
- Use and energy saving in industry
- Pollution prevention technology