

# Nikolaos-Ioannis (Nikos) Pronios, PhD<sup>1</sup>

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## Experience

1. **Innovate UK<sup>2</sup>** is the UK's innovation agency, working with people, business, the research base, Government Departments, Research Councils, venture capitalists and other partner organisations to discover, identify and drive the science and technology innovations that will grow the UK economy. The main objective is to accelerate economic growth by stimulating and supporting business-led innovation.
  - **Impact Management Business Partner** (2022-present): Developing and implementing a framework for the Impact Management & Assessment of Innovate UK's activities/interventions, focusing on impact metrics & KPIS, as well as objective setting towards programme evaluation
    - The Impact Management framework started as an organisation-wide change project integrating innovation, economic, sustainability and wider eco-system impacts at the start of programmes, across Innovate UK, ensuring alignment with organisational goals, has moved into the business-as-usual mode; further enhancements are being/will be implemented aligned with the organisation's maturation in terms of people, processes & tools and the overall strategy formulation.
  - **Innovation Lead - Robotics & Autonomous Systems/Artificial Intelligence (RAS/AI)** (2016-2023): Member of the team responsible for developing and delivering the technology innovation strategy for UK's wealth creation on Robotics & Autonomous Systems (RAS) and related Artificial Intelligence (AI) technologies.
    - Activities focused mainly on the [Robotics and AI in extreme environments Super Challenge](#)/Robots for a safer world program, the aim of which was taking humans out of dangerous, harsh or extreme environments; part of the multi-billion £ [Industrial Strategy Challenge Fund \(ISCF\)](#).
  - **Lead Technologist – Information & Communication Technologies** (2014-16): Responsible for developing and delivering the technology innovation strategy for UK wealth creation in the Information & Communication Technologies (ICT) area, as well as Cyber-physical & autonomous systems (CPS/AS).
2. **European Commission Assessor/Evaluator** (1995-present):
  - Assessor/Evaluator for proposals/applications mostly in the ICT domain.
3. **Energy Efficiency Solutions & Services** (2009-14) Greece:
  - Founder of the e2s2 consultancy on energy efficiency solutions on Renewable Energy Sources, microgrids & buildings.
4. **Athens Information Technology (AIT):** Non-profit Education and Research Center in the fields of Information Technology, Telecommunications and Innovation in Attika, Greece
  - **Research and Teaching Fellow** (2007-14)<sup>3</sup> Involved in teaching and research work for Telecoms/networking, Green ICT, Energy Efficiency, CPS and Smart Grid.
5. **[INTRACOM DEFENSE ELECTRONICS \(IDE\)](#)<sup>4</sup>** Attika, Greece
  - **Manager, Network Centric Systems and New Technologies** (2008-12): Developing Operational Requirements Documents (ORDs) for future products; pursuing National, EC, ESA and EDA funding

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<sup>1</sup> Currently residing at 50 Florey Court, Swindon SN1-4GX, UK

<sup>2</sup> Innovate UK, formerly known as the Technology Strategy Board or TSB (until August 2014), is now part of [UK Research & Innovation \(UKRI\)](#), which, as of April 2018, is a non-departmental public body sponsored by the [Department for Science, Innovation & Technology \(DSIT\)](#).

<sup>3</sup> Part time mostly; full time between January 2013 and February 2014 only.

<sup>4</sup> With security Clearance for the corresponding National, EU/EDA & NATO activities.

opportunities for R&D; preparing and submitting bids for commercial projects; strategic planning for network-centric activities.

- **Network Centric Solutions Business Development** (2006-08): Leading on system architecting, solution formulation and commercial bid preparation for the networking domain, with primary focus on satellite communications & applications.

## 6. **INTRACOM/INTRACOM Telecom**<sup>5</sup> Attika, Greece

- **Development Programmes Department Manager** (1999-2006).  
Line Manager also working on Market Analyses and product Business Planning and new markets projects implementation.
  - Also, as Emerging Technologies & Markets Dept. and International Co-operations Dept.<sup>6</sup>
  - My hands-on R&D involvement was mainly on broadband wireless (fixed and mobile) systems, MIMO systems, IP networking and residential gateways.
  - Intracom was among the leaders in terms of funding and projects' lead in the European Framework Programmes of the period.
- **Development Programmes Broadband Access Section/Area Leader** (1994-98)  
Team leader, & project Manager, for (mostly co-funded) projects focusing on Broadband Access, wireline and wireless (VDSL and initiation of W-ATM/HiPerLAN II work), and interworking units for UMTS, both for Terrestrial and Satellite Components (T- & S-UMTS).
  - Also pursued National, EC funding opportunities, and contributed on technology aspects on bids for new (for the organisation) market segments.
- **Development Programmes Project Coordinator** (1992-94)  
Project coordinator for a variety of co-funded projects ranging from Multimedia Synchronization to networking architectures; also pursuing National, EC funding opportunities.

## 7. **National and Kapodistrian University of Athens (NKUA)** Athens, Greece

- **Instructor** (1994-95)  
Taught Graduate Course "*Network Design & Architectures*" for the Dept. of Informatics

## 8. **Bell Communications Research (Bellcore)**, New Jersey, United States

- **Member of the Technical Staff** (1988-92)  
Participated in the exploration of new services concepts for visual applications and broadband communications services, including Picture Archive & Communication Systems (PACS) and early scenarios for the (then new) concept of Video-on-Demand using ADSL and HDTV technologies.

## 9. **University of Southern California**, Los Angeles, CA, USA

- **Teaching/Research assistant Applied Mathematics & Electrical Engineering Depts** (1982-88)  
Teaching support sessions of undergraduate & graduate courses of the curriculum and performing research mainly for the PhD Thesis requirements.

# Education

## 1. **University of Southern California, USC**, Los Angeles, CA, USA

[Viterbi | Ming Hsieh Department of Electrical and Computer Engineering](#)

**PhD in Electrical Engineering** – 1984-88

Thesis: "*On the Performance of Slotted Random-Access Networks Under Jamming*"

## 2. **University of Southern California, USC**, Los Angeles, CA, USA

[Viterbi | Ming Hsieh Department of Electrical and Computer Engineering](#)

**MSc, Electrical Engineering – Systems** 1982-84

## 3. **University of Patras**, Patras, Greece

[Electrical Engineering Dept.](#)

**Diploma in Electrical Engineering** 1977-82 (5-year degree program).

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<sup>5</sup> After the break-up of INTRACOM S.A. in 2005, in different companies of the INTRACOM Group, this Department was with INTRACOM Telecom Solutions S.A.

<sup>6</sup> These are different names for the department; while some details and scope changed in various corporate re-organisations that took place, the main underlying activity remained the same, that of developing Research & Innovation collaborations within Europe.

## Selected Publications

- Pronios, N., Polydoros, A. (1988)  
*Slotted, ALOHA-type monohop networks under dynamic jamming,"*  
**IEEE MICOM**
- Pronios, N., Polydoros, A. (1988)  
*Approximate Methods for Analyzing Slotted Random-Access Spread-Spectrum Networks*  
**IEEE INFOCOM**
- Pronios, N., Polydoros, A. (1990)  
*On the Power Spectral Density of Certain Digitally Modulated Signals with Applications to Code  
Despreading*  
**IEEE Journal on Selected Areas in Communications**
- Pronios, N. (1990)  
*On the Stability of Spread-Spectrum Networks with Decentralized Recursive Retransmission Control  
under Jamming*  
**IEEE INFOCOM**
- Pronios, N., Dravopoulos, I., Andritsou, A. (1998)  
*A DLC Layer Framework for Wireless ATM Networks*  
**IEEE PIMRC**
- Bozios, T., Pronios, N., Georgiapis, P. (2000)  
*Experiences from the Implementation and Use of Multimedia Synchronization Mechanisms*  
**European Transactions on Telecommunications**
- Oikonomou, K., Pronios, N., Stavrakakis, I. (2005)  
*Performance Analysis of Topology-Unaware TDMA MAC Schemes for Ad Hoc Networks with  
Topology Control*  
**Computer Communications**
- Papadakis, G., Pronios, N. (2011)  
*Performance Considerations of MIMO-Based Ad-Hoc Networks*  
**IEEE MILCOM**
- Co-author (2015)  
*Software Engineering for Smart Cyber-Physical Systems — Towards a Research Agenda: Report on  
the First International Workshop on Software Engineering for Smart CPS*  
**ACM SIGSOFT Software Engineering Notes**