

Dan Stefan Tudose

Curriculum Vitae

Education

- 2009–2011 **Doctor of Philosophy (Ph.D.)**, *Computer Science*, University Politehnica, Bucharest
Research in low-power Wireless Sensor Network design and Energy Harvesting techniques with focus on the design and modeling of the behaviour of energy-independent sensor networks. Dissertation on *Wireless Sensor Networks in Energy-Constrained Environments* advised by Prof. Nicolae Tapus
- 2007–2009 **Master of Science (M.Sc.)**, *Computer Science and Engineering*, University Politehnica, Bucharest
Research on low-power distributed systems with a focus on Wireless Sensor Networks and power management protocols for sensor network systems. Dissertation on *Energy Harvesting and Power Management in Wireless Sensor Networks* advised by Prof. Nicolae Tapus
- 2002–2007 **Bachelor of Science**, *Computer Science and Engineering*, University Politehnica, Bucharest
Research in data communication protocols and the design of an innovative peer-to-peer transfer protocol designed for high-performance content distribution. Thesis title *Tit-For-Tat - A New Peer-to-Peer File Transfer Protocol* advised by Prof. Nicolae Tapus and Prof. Teo Yong-Meng

Expertise

Associate professor with years of experience in designing and delivering engineering courses and applied research in computer science, especially in the field of embedded systems, low-power computing architectures, wireless sensor networks, energy harvesting, robotics, digital circuit design and fault-tolerant systems.

Highly trained professional in computer engineering with strong management and technical skills to research vertical-based product solutions. Company-wide leader on embedded technology managing development of products with cross-functional team based on specifications and customer feedback. Engaged in the development of product roadmaps, technical product development, marketing, and pre/post-sales support activities.

Experience

2017–Present **Associate Professor**, University Politehnica, Bucharest

My interests lie in the field of pervasive computing, embedded systems, low-power computing architectures, robotics, digital circuit design and fault-tolerant systems. I am particularly interested applying energy harvesting to wireless sensor network architectures.

I am currently leading the Embedded Systems Laboratory of the Computer Science Department and lecturing five graduate and undergraduate courses on the topics of Wireless Sensor Networks, Digital Computer Design, Fault-Tolerant Computing and Embedded Systems.

Since joining the Computer Science Department of the University Politehnica Bucharest in October 2007, I have been involved as a researcher and project manager in a series of national and international research projects for the development of the Internet of Things.

2016–2025 **Senior Engineering Manager**, Fitbit, Google, Bucharest

Fitbit is a provider of health and fitness devices. Now part of Google, Fitbit's platform combines connected health and fitness devices with software and services, including an online dashboard and mobile applications, data analytics, motivational and social tools, personalized insights and virtual coaching through customized fitness plans and interactive workouts.

Responsibilities and achievements:

- Managing the technical development of the next generation of Fitbit products. Contributed to the successful launch of a number of Fitbit product lines including Ionic, Versa, Charge, Sense and Aria.
- Grown the Embedded Software Development team in Bucharest from 4 to almost 50 developers in one year.
- Managing a team of 70 engineers and managers, working in product and platform teams, specializing in low-power embedded development.
- Member of the site management team, leading Device Software Development activities.
- Coordinating the Google Academic Program for Romania.
- Managing hiring, performance appraisal and project staffing.

2013–2016 **Co-Founder**, Vector Watch, Bucharest

Vector Watch is a smartwatch company based in London, United Kingdom with hubs in Romania, the Netherlands, Hong Kong, and the United States. The company produces a series of elegant smartwatches which offer an unprecedented 30-day battery lifetime.

My responsibilities in the company were:

- Plan and manage all hardware development activities for current projects.
- Design specifications into product schematic and PCB, approve and release design files to manufacturing.
- Monitor manufacturing facilities during production and devise QC, QA, and production yield improvement procedures.
- Conduct and manage all hardware research and development activities for new products.
- Collaborate and coordinate with other departments in the company and for all product development activities.
- Establish and manage relationship with electronic component manufacturers and providers.
- Investigate new development areas and technologies, find new prospective project partners.
- Conduct technical presentations at events, conferences, and seminars.

2011–2014 **Founder, CEO**, PollutionTrack, Bucharest

The start-up produced a portable air quality sensor. The small wearable measures direct air pollution exposure, giving the user real time alerts in case of danger. Collected data is sent to a mobile app where it can be viewed and where it's also aggregated with the geographical location of the wearer. Also, there is a community-based approach, in which anonymous data is sent to the cloud in order to construct accurate public pollution maps at city-level.

2011–2017 **Lecturer**, University Politehnica, Bucharest

2007–2011 **Assistant Professor**, University Politehnica, Bucharest

2009–2010 **Graduate Research Assistant**, Hochschule fur Technik und Wirtschaft, Dresden

Worked as a researcher in the Embedded Systems Laboratory on the design of energy-harvesting techniques. During my stay, I designed and deployed an ultra-low power wireless sensing network which uses energy harvesting in order to ensure unbounded battery lifetime for the sensor nodes. Results of my research in Dresden were the basis for my PhD. dissertation.

2007 **Research Assistant**, National University of Singapore, Singapore

As part of my bachelor thesis, I worked on a peer-to-peer file transfer protocol based on the fair-sharing principle. The protocol is designed for the sharing of large files and attempts to achieve the correct incentive structures while fully exploiting the bandwidths between peers.

Languages

Romanian	Mothertongue
English	Proficient
French	Intermediate
German	Beginner