

DR. NIKOLAOS MAVRIDIS - CURRICULUM VITAE

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1. Personal Information

a. Education

- PhD, Massachusetts Institute of Technology (MIT), 2002-2007 (Full-time on-campus), GPA: 4.9/5 Area: Artificial Intelligence and Robotics
- MS, University of California Los Angeles (UCLA), 1999-2000 (Full-time on-campus), GPA: 3.97/4 Area: Control, Signal Processing, Computer Vision
- MEng, Aristotle University of Thessaloniki (AUTH), 1993-1999 (Full-time on-campus), Suma Cum Laude Area: Electrical & Computer Engineering, Specialization: Computers & Electronics
- In parallel but independent to my Engineering Degree, I also took:
BSc, The UK Open University, 1993-1998, First Class Honors (Suma Cum Laude) Major: Pure & Applied Mathematics, Minor: Music Theory, Harmony & History
- Professional Development Course Certificates (8-10 week \$2000 courses with Assignments/Projects):
Participatory Leadership in Practice, Maria Scordialos / Art of Hosting Network, 2013
Social Sector Leadership, University of California Berkeley, Haas School of Business, 2017
Big Data & Social Analytics, Massachusetts Institute of Technology (MIT), 2017
Internet of Things: Business Implications and Opportunities, MIT (Sloan), 2017
Innovation of Products and Services: MIT's Approach to Design Thinking, MIT, 2017
Business, International Relations, and the Political Economy, London School of Economics, 2018
Beyond Smart Cities: Emerging Design and Technology, MIT (Prof. Kent Larson), 2022
Commercial Real Estate Analysis and Investment, MIT (Prof. David Geltner), 2022
Leading Digital Transformation in Healthcare, Harvard Medical School, 2023
Additive Manufacturing for Innovative Design and Production, MIT (Prof. John Hart), 2023
Virtual Reality and Augmented Reality, MIT (Prof. Fox Harrell), 2023
- Numerous more certificates: Evaluation of AI Applications in Healthcare (Stanford), 2021
Storytelling and Persuading using Data and Digital Technologies (UMaryland), 2021
Introduction to Negotiation: A Strategic Playbook (Yale), 2021
SAP Analytics Cloud, Business Process Improvement, Business Process Modelling etc.

b. Professional experience

- Principal Data Scientist, SAP Global Center of Excellence '20-23 (detailed description next page)
- Freelance Academic and Consultant, 2014-
Teaching graduate university courses and seminars, as well as training; Supervising PhD and masters thesis; Designing courses, curricula and degree Programs; Performing, Recruiting for, Managing and Supervising dedicated special Research and Development projects; Authoring and reviewing academic Publications and White Papers; Authoring and reviewing Research Funding Proposals; Team building, including recruitment and interviewing; Providing technical due diligence services investigating and evaluating companies and products that my clients would like to invest in and/or acquire; Authoring background reports providing the academic & industrial state-of-the-art in emerging areas; Membership in advisory boards and executive committees; Connecting & networking stakeholders; Giving keynote lectures; and more. Also numerous pro-bono services and positions; see the services section that follows for more details.
(following near-fatal accident on September 7, 2017, was unconscious in Intensive Care Unit for a week, and underwent surgery, and then multi-month recovery followed)
- Full Professor and Robotics Institute Director, Innopolis University, 2015-2017 Innopolis was originally created in collaboration with CMU USA, one of the world's 4 best unis in computer science, and is together with Skolkovo the two top universities of their country.
- Senior Researcher, NCSR Demokritos Athens, 2012-2015
- Ass. Professor of Research (Adjunct), CSE, New York University Poly, 2012-14
- Ass. Professor, Computer Engineering, New York University Abu Dhabi, 2011-13
- Asst. Professor, College of IT, United Arab Emirates University, 2007-11
- Founder and Director, Interactive Robots and Media Lab, UAEU - NYU – NCSR – Independent Commercial Entity, 2008-
- Research Assistant, MIT Media Lab, Affective Computing & Cognitive Machines, 2002-2007 Research Areas: Interactive Robots and Language, Machine Learning, Computer Vision & Face recognition, Activity Detection & Recognition
- Have also taught Masters (graduate) courses and supervised thesis at various other universities, including the Hellenic Army Academy (Evelpidon) in Athens, Harbor.Space in Barcelona, and more.

Activities as per my position as PRINCIPAL DATA SCIENTIST at the SAP GLOBAL CENTER OF EXCELLENCE for the Business Technology Platform:

INDUSTRIES OF EXPERTISE: Healthcare, Public Sector, Defense & Security, Shipping - Maintained & Created Use Case Portfolios for these Industries

SOME OF THE SERVICES OFFERED:

- **Data Value Workshops** customized for each client
- **Use Case Discovery Workshop** (Structured, utilizing **Design Thinking** Process with standardized stages, On-Site or with Mural)
- **PoC:** Data Negotiation, Scope Definition, Implementation (Primarily Data Science using HANA Predictive Analytics Library, Dashboards with SAP Analytics Cloud etc), Presentation
- **Adoption Expert Advisory Services (Post-sales**, helping the customer's team extend and expand and operationalize our products/PoC's, and thus catalyzing renewal)
- Public **Talks** / Webinars & Talks within SAP (For conferences, Business Transformation Tours, AFSUG, Winnovate Series and more)
- **Blog** Authoring / **Academic Paper** Writing / **White Paper** Writing / Delivering **Academic Talks** (from SAP to University in Portugal etc.)
- Two successful projects at 1BL (**One Billion Lives**) SAP Social Intrapreneurship (one won regional and reached Global Competition, the other **won Global**)
- NUCARE** (Nutrition and Care for the Elderly during the pandemic, utilizing supply-chain excess and crowdsourced voluntary delivery)
- PANDEMIC COHORT MANAGEMENT** (SAP+INTEL, Minimizing the health cost of small meetings during the pandemic through individual risk-informed optimization)
- Helped design the SAP Karlsruhe Institute of Technology **VR/Metaverse-based Business Simulation Exercise** towards recruiting, ran and analyzed results

SOME OF THE HANDS-ON SKILLS EXERCISED:

Software: HANA (APL, PAL, ...), DI, SAC, Matlab, etc.

Languages: Python, Java, C++, Assembly

Methods: NLP, ML, Deep Learning, AI, UX Evaluation

Other: Embedded System Design, Analog/Digital Electronics, Sensors/Actuators/IoT/Robotics, Math Modelling, Background search for topics in Academic & Industrial literature, Interviewing & Mentoring AI/DS professionals

2. Research, Scholarly, and Creative Activities

(Full listings can be given upon request)

- **Publications:** >3800 citations per Google Scholar (**h-index>30, i10index>=54**)

>85 peer-reviewed academic publications, 1 best paper award, 1 patent

- **Keynote Lectures & Invited Talks:** >15 Conference Keynotes, >75 Invited Talks

- **Exhibits:** >10 Participations in International Exhibitions with Interactive Robot Demos

- **Publicity:** Television and Media of more than 30 countries and >500K youtube views

(check: Ibn Sina Robot etc.)

- **Microsoft External Research Award:** 50K USD award for Facebooks project

▪ **Reviewer for:** IEEE Systems, Man and Cybernetics, IEEE RO-MAN, IEEE HRI, ICVW, ICVS, and many more, **Topic Editor** in EPFL's "Frontiers in Robotics and AI", EU-Funded Research Proposals, France Agence National Recherche, Austrian WWTF etc.

3. Teaching, Mentoring, and Advising

Peer and student evaluation reviews for teaching: **excellent**

Overlooked and contributed to **ABET Accreditation Process** for courses & programs

- **Courses taught include:**

Massachusetts Institute of Technology:

Guest Lectures at: MAS622 Pattern Recognition and Analysis (Fa06)

Seminars in: Robotics, Embedded Systems, etc.

United Arab Emirates University:

Research Case Studies (Fa10)

Machine Learning (Sp11)

Artificial Intelligence (Sp09, Fa09, Sp10, Fa10)

Object-Oriented Programming (Sp08, Fa08, Fa09, Sp10, Fa10, Sp11)

Data Structures and Algorithms (Su08)

Operating Systems (Su08, Fa08, Sp08)

Computers and Scientific Apps (Fa07)

IT Core Project (Fa08), Senior Project (Sp08, Sp09, Sp10, Fa10)

New York University (NYU AD):

Research-Centric Summer School In Interactive Robotics (Su12)

Inventions: A multi-disciplinary hands-on course (Sp12, description below)

INNOPOLIS University:

MS-RO201 Introduction to Intelligent Systems and Robots (2016, 2017)

MS-RO221 Introduction to Graduate Research (2016, 2017)

MS-RO231 Pattern Recognition and Deep Learning (2016)

BS-1CA Computer Architecture (2016)

Masters Thesis Supervision for MS-RO (2016, 2017)

Other Universities: Graduate Courses, Short Courses, PD Seminars in numerous unis, including Hellenic Army Academy, University of Crete, Barcelona etc.

▪ **Program, course, and curriculum development:**

CSBP301 Artificial Intelligence (UAEU, 2010)

Totally new curriculum, including intelligent systems coverage, covering basics of history of AI, software agents, pattern recognition, vision, speech and language tech, robotics etc. to act as the core Intelligent Systems track course. Multimedia lecture and lab material developed, using OpenCV, Matlab etc.

COREA-AD22 Inventions (NYUAD, 2012)

An innovative interdisciplinary study of invention, including a strong hands-on project-based component. Students examined the history, psychology, and economics of Invention, as well as aspects of intellectual property and modern day entrepreneurship. In the parallel practical track, they were introduced to mechanics, automation, design and construction techniques, and during the month-long projects they created prototypes of numerous real-world inventions.

Third-Year Courses (NYUAD, 2012)

ENGR-AD 306 Intelligent Systems, ENGR-AD 308 Machine Vision

ENGR-AD 305 Robotics, ENGR-AD 313 Embedded Systems

Graduate Courses and Programs (INNOPOLIS, 2016)

MS-RO201 Introduction to Intelligent Systems and Robots MS-RO221

Introduction to Graduate Research

MS-RO231 Pattern Recognition and Deep Learning

MS-RO Masters Program in Robotics: Course and Curriculum Design

Supervising Student Research:

>78 Undergraduate Students

(6 at MIT, 36 at UAEU, 10 at NYUAD, 24 at INNOPOLIS etc.)

>21 Graduate Students (18 M.Eng, 3 PhD)

Numerous more PhD students and PostDocs during Collaborations

4. Service

- **IEEE UAE award:** Received in 2015 for having served as Founder and Chair of the IEEE UAE Robotics and Automation (RAS) Society, from 2012-14
- **Hellenic Artificial Intelligence Society (EETN):** Vice-Chair, 2013-17
- **EU Cognition III Network (EUCog):** Member and Selected Participant in "Future Challenges" planning workshops for roadmaps of EU CogSys Research, 2010-
- **IEEE Computational Intelligence Society (CIS):** Autonomous Mental Development Language and Cognition Task Force: Co-chair since 2012, Organizer of the symposium "Embodied vs. Simulated Behaviour and Cognition: What could Robotics contribute to Language Sciences?" in 50th Annual Convention of the Association for Artificial Intelligence & Simulation of Behavior (AISB), London, UK, April 1-4 2014
- **Professional Memberships:** IEEE (International Institute of Electrical & Electronic Engineers), AAI (American Artificial Intelligence Society), IMA-UK (Institute of Mathematics and its Applications), TEE (Greek Engineering Syndicate)
- **Proposal Reviewing:** French Agence National Recherche, Greek Res. Mat., EU ERC, Austrian WWTF, Onassis Foundation, and more.
- **Multi-party Research Proposal Authoring for EU and beyond:** Built international teams and led the proposal creation of 3 EU FP7 and Horizon proposals, and wrote parts in many more, including US NSF and other international research funding orgs.
- **Consulting and Training:** services have been provided to academics, universities, labs and companies regarding robotics-related activities, in numerous countries.
- **University Committees:** UAEU IT College Outreach Committee 2009-10, Student Recruitment Committee 2008-09, Course Coordination Committee for ITBP219, University Purchasing Committee, Supervision of internships of 6 CIT student groups, and many more
- **UAEU Graduate Program and Research Center Development:** Took part in creation of proposals: a) MSc in Cognitive Sciences proposal, b) PhD program proposal, c) Research Center in Cognitive Systems and Sciences
- **GCC Cognitive Science Society:** One of the two founding members of the society, with more than 20 members, ranging across IT, neuroscience, linguistics, philosophy, medical imaging, psychology, which have spanned across three universities and two countries. Reading group with 10 enthusiastic 2-hour presentations per semester
- **Shanghai Lectures:** Facilitated participation of UAEU and NYU AD in the international video-conference and online collaboration environment-based lecture series (organized by Prof. Rolf Pfeiffer), with participation of research assistants and students, with full interactivity through H.323 videoconference
- **"Best pipe inspection robot" award** at Schlumberger i-Design: Advised team of two CIT students which together with two more UAEU students and four TokyoTech students, who during 2008-09 designed and built a prototype of an oil-pipe inspection robot, as part of the international i-Design Schlumberger course, and won the award.
- **Conference and Workshop Organization:** Special Session in IEEE Innovations '07, Two workshops in IEEE Innovations '08 conference, and "Embodied vs. Simulated Behaviour and Cognition: What could Robotics contribute to Language Sciences?" workshop in AISB 50th Convention, London, April 1-4 2014

- **World Robotics Olympiad:** Member of four-person team that created and presented the successful United Arab Emirates bid for hosting the World Robotics Olympiad 2011 in Abu Dhabi. Then, member of technical committee, prepared competitions. Also taught educational robotics & coached teams (HAEF Athens 2013)
- **Electrical Engineering Students European Organization EESTEC:** Trainer and Mentor for European Competitions in Machine Learning, IoT, etc.
- **MIT Hellenic Student Association:** Vice-President & Executive Committee member
- **MIT Addir Interfaith Dialog Program:** Fellow
- **MIT Educational Council:** Member, performing prospective student interviews
- **MIT Enterprise Forum:** Mentor for numerous start-ups
- **UC Berkeley HAAS School of Business:** Received Social Sector Leadership Certificate upon completion of seven courses of the Philanthropy University program
- **Dubai Prime Minister's Office "Drones for Good" and "Robotics and AI for Good" competition:** Primary Judge
- **Board Member:** In various organizations worldwide
- **Summits:** Invited guest at UAE Government Summit, Abu Dhabi Strategic Debates, etc.
- **TED Conferences:** TEDx Speaker 4 times (Geneva, Athens, Al Ain, Carthage), certified for curation and organization of large TEDx events (through TED Global)
- **Invited Keynote Speaker:** Keynotes at Kurzweil's **Singularity University** Summit, and invited talks in >5 venues annually, such as institutions, academic & business conferences etc.
- **Extensive experience in creating and leading AI and Robotics and Data Science R&D and Academic Departments and Programs, in project co-design and management, collaboration building, hiring/interviewing, and public talks.**

5. Selected References (More available upon request)

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