

Dr. Yehonatan (Jenya) Tilchin

Senior Physicist, Research Management, Multidisciplinary Team Leader

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I'm leading multidisciplinary R&D teams of Ph.Ds. and engineers in development of deep tech products. My work includes:

- Development of research strategies in accordance with overall product creation plan
- Definition of tasks and their prioritization
- Transferring of academic knowledge into R&D process
- Design of experiments, data analytics' and development of analytical models

Achievements

- √ Development of 3 beta tested monitoring systems for precision agriculture and water monitoring
- √ Two patent pending applications
- √ Two generations of Ph.D. students used developed by me methodologies and equipment
- √ International research projects with universities in Germany, USA, Switzerland, and Netherlands
- √ 18 published peer-reviewed articles, speaker at conferences (For Google search use – Jenya Tilchin)

Employment history

2019-present –Physics Team Leader, Israel based global company

Responsible for day to day operation and planning monthly sprint of team's activities, communication and synchronization with other teams (SW, mechanics, data science), participation in technical decision-making

- Building multidisciplinary team of Ph.Ds and engineers inc. definition of roles and responsibilities, hiring
- R&D of factory calibration process adjusted for mass production inc. supporting analytical models and algorithms
- R&D of pulsed broadband light source
- Development & testing of optical assembly jigs
- Integration of prototypes and definition of V&V protocols
- Report and formal requirement documentation

2017-2020 - Co-founder, To4C

The company provided outsourcing R&D services to startups, industry, and private investors. I was in charge of planning and execution of custom R&D, science & technology due diligence, and report writing to customers and authorities.

2016-2017 – Senior Physicist, Croptimal

Responsible for development of hyperspectral sensors, and utilization of electrochemical sensors for precision agriculture. Monitoring system was beta tested.

- Calibration procedure
- Chemometric models for NIR and UV sensors
- Construction of laboratory
- Sample preparation methodology

2010-2015 - Teaching assistant, Technion

- Physical Chemistry laboratory course instructor, undergraduate course
- Nanoscience and Nanotechnology laboratory course instructor, graduate course

2010-2016 – Ph.D. and Post-Doc Researcher, Technion

- Initiation of collaborative research projects
- Research instructor of Ph.Ds. and Master students
- Design and development of customize research equipment for confocal microscopy, RAMAN, UV-VIS-NIR and magnetic resonance spectroscopies at cryogenic temperatures
- Development of research methodology
- Construction of research laboratory

Education

2015 – 2016 – Post-Doc and Researcher, Technion

Semiconductors Physics of novel photovoltaic cell materials

2010-2015 - Ph.D., Israel Institute of Technology - Technion (excellence program)

Interdisciplinary Nanoscience and Nanotechnology Institute, Solid State and Semiconductors Physics

2007-2010 - M.Sc. (with honor) in Theoretical Physics, Bar-Ilan University

2003-2006 - B.Sc., in Chemistry and Mathematics, Bar-Ilan University

Volunteer (2018-2019)

- Mentoring teenagers at entrepreneur center as a part of learning process
- Consult entrepreneurs at MATI Haifa

Skills & Expertise

- Molecular sensing technologies: optical, electrical, colorimetry, nanomaterial sensors
- Molecular spectroscopy: UV, Vis, NIR, FTIR, Raman
- Development of custom sensors
- Design of experimental and research work
- Experience in water monitoring, precision agriculture, medical devices, renewable energy, nanotechnology, and semiconductors for lightning and sensoric
- Written and oral communication skill
- Reports to clients and state authorities, articles, blogs and grant proposal writing
- Reading literature for development of professional skills

Other

Software

MATLAB (expert level), SOLIDWORKS, Comsol

Languages

English (fluent level), Hebrew (mother tongue), Russian (mother tongue)

Army experience

2006-2009 - Compulsory service in “Hazardous Materials Center”

2010 – present – Operation officer (reserve) in “Hazardous Materials Center”, rank- captain