Gur Mittelman

Gur Mittelman:
ResearchGate: https://www.researchgate.net/profile/Gur-Mittelman-2
Google Scholar: https://scholar.google.co.il/citations?user=oiV6qCwAAAAJ&hl=en&oi=sra
LinkedIn: https://www.linkedin.com/in/gurmittelman/

- **Ph.D. Mechanical Engineering; Expert in Energy Systems and multidisciplinary projects; Skilled in technical management of renewable energy products and technologies**
- **Experience in leading processes from feasibility and viability studies, through R&D to final implementation; Expert in technical writing and documentation**
- **Constantly at the forefront of research and technology in both industry and academia, transferring and implementing knowledge in commercial projects**
- **Experience in managing local and foreign subcontractors and advisors, and representing companies in various business development stages, including financial closing**

Employment experience:

2021-today: **Faculty member, Afeka College of Engineering**

2014-2021: **Researcher, Lecturer**

- Main projects:
  - 2017-today: **Entrepreneur, researcher** and leader of **projects in solar spectral splitting** systems: agrivoltaics, polygeneration and photochemical conversion, and alternative fuels production (Tel Aviv University, Agricultural Research Organization)
  - **Chief Performance Engineer** at the Ashalim PLOT A power plant (Negev Energy)
  - **Technical Manager** of a project involving performance enhancement of photovoltaic **(PV)** devices, using nano-coatings (Capital Nature)**;** management and leadership of professional, multi-disciplinary team (academia, foreign advisors & BD)
- 2014-today**: Lecturer** at Afeka College of Engineering, Department of **Energy Engineering** (graduate): Renewable Energy, Energy Storage, Energy Efficiency. Courses at the Department of **Mechanical Engineering** (undergraduate): Heating, Ventilation and Air-Conditioning (**HVAC**).
- 2018-today: **Advisor** for 5 students for graduate (M.Sc.) degree at Afeka

2011-2014: **R&D Engineer and Scientific Advisor - SHIKUN & BINUI Renewable Energy**

- **Scientific Advisor: active participant in Business Development processes** and responsible for conducting feasibility studies and technical due diligence, for both commercial products and new technologies; Main field: utility solar thermal and PV plants
- **Performance Engineer**

- **R&D Engineer:** member of a multi-disciplinary team developing new parabolic trough collectors:
  - From concept, through analysis and testing, prototypes to final implementation including acceptance testing
  - Responsible for analysis and testing in the fields of mechanics, control, optics and heat transfer
- **Sub-contractors and advisors management:**
  - Define requirements, negotiate, supervise and approve
- **Documentation of:** requirements, technical specifications, testing procedures and reports

2008-2011: **R&D Engineer and Scientific Advisor – ASP and Ram Power**

- Research and development of solar energy products, collaborating with the Chief Scientist: Michael Epstein (Weizman Institute of Science)
- From literature survey, through concept development and analyses including applications of three patents
- Presentations to potential strategic partners and investors

2006-2008: **Post-Doctoral Fellow, University of Minnesota, USA**

- Research in heat and mass transfer in solar energy systems, collaboration with General Electric's labs:
  - Fundamental and applicative research in a combined team of academic researchers and engineers from General Electric (GE)
  - Routine participation in meetings and submitting status reports to partner companies
  - Meet industrial schedules and quality standards

1999-2006: **Lecturer, Advisor and TA – School of Mechanical Engineering, Tel Aviv University**

Education:

2001-2006: **Ph.D.** (3/2007), **School of Mechanical Engineering**, Tel Aviv University, Tel Aviv, Israel
Thesis: "Cogeneration with concentrating PV systems" (Advisors: Prof. Avi Kribus, Dr. Avi Dayan)

1999-2001: **M.Sc. Mechanical Engineering with minor in Business Management**, Cum Laude School of Mechanical Engineering, Tel Aviv University, Tel Aviv, Israel
Thesis: "Experimental study of free convection from a hot finned surface facing down"

1992-1995: **B.Sc. Mechanical Engineering,** Ben Gurion University, Beer-Sheva, Israel

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Tools & technologies:

Software tools for CFD, optics and plant analysis; renewable energy and storage systems performance; experimental methods for engineering

Military service: Combat Reserves (1991-1995); Ordnance Corps (1995-1998); Reserve duty (1998-today)

Languages: Hebrew – native | English – fluent

Publications, patents, awards and grants:

Recognized innovator with multiple patent applications and dozens of articles published in leading scientific journals and conference proceedings with over 1500 quotes; About 8 Israeli and international scientific awards; Won two prestigious grants in the field of agrivoltaics in 2020: from BARD and the Israeli Ministry of Energy (MoE). Reviewer for numerous scientific journals including *Solar Energy*, *Solar Energy Engineering*, *Energy Conversion and Management*, and *Desalination & Water Treatment*

Selected Publications:

1. Mittelman, G., Ronen, E., L. Zhivin, Y. Luzon, O. Eisenhändler, M. Tshuva. The potential of renewable electricity in isolated grids: The case of Israel in 2050. *Applied Energy* (2023). Accepted.
2. Mittelman, G., Kariv, Y., Cohen, Y., Avineri, E. Techno-economic analysis of energy supply to personal rapid transit (PRT) systems. Applied Energy 306, 11806 (2022).
3. Mittelman, G., Kribus, A., Epstein, M., Lew, B., Baron, S., Flitsanov, Y., Vitoshkin, H. Solar spectral beam splitting for photochemical conversion and cogeneration. Energy Conversion and Management 258, 115525 (2022).
4. Neubauer, A., Yochelis, S., Mittelman, G., Eisenberg, I., Paltiel, Y. Simple down conversion nano-crystal coatings for enhancing Silicon-solar cells efficiency. AIMS Material Science 3(3), pp. 1256-1265 (2016).
5. Segev, G., Mittelman, G., Kribus, A. Equivalent circuit models for triple-junction concentrator solar cells. Solar Energy Materials and Solar Cells 98, 57-65 (2012).
6. Mittelman, G., Epstein, M. A Novel power block for CSP systems. Solar Energy 84, 1761-1771 (2010).
7. Mittelman, G., Alshare, A., Davidson, J.H. A model and heat transfer correlation for rooftop integrated photovoltaics with a passive air-cooling channel. Solar Energy 83, 1150-1160 (2009).
8. Mittelman, G., Kribus, A., Dayan, A. Solar cooling with Concentrating Photovoltaic / Thermal (CPVT) systems. Energy Conversion and Management 48, 2481-2490 (2007).