

Curriculum Vitae

Name: Dr. Moshe Tshuva

Date: March 2023

1. Personal Details

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2. Higher Education

a. Undergraduate and Graduate Studies

Period of Study	Name of Institution and Department	Degree	Year of Approval of Degree
1992 – 1998	Tel Aviv University, Israel	Ph.D. in Mechanical Engineering	1998
1991 – 1993	Gordon Institute – Energy, Tel Aviv University, Israel	Certificate Studies	1993
1987 – 1991	Tel Aviv University, Israel	M.Sc. in Mechanical Engineering	1991
1979 – 1983	Tel Aviv University, Israel	B.Sc. in Mechanical Engineering	1983

3. Academic Ranks and Tenure in Institutes of Higher Education

Dates	Name of Institution and Department	Rank/Position
March – October 2024	https://iiasa.ac.at/ International Institute for Applied Systems Analysis Vienna, Austria	Visiting Professor Invitation for sabbatical
2002 – present	Afeka Academic College of Engineering, Tel Aviv, Israel	Senior Lecturer

1999 – 2002	Afeka Academic College of Engineering, Tel Aviv, Israel	Lecturer
1998 – 2003	Tel Aviv University, Tel Aviv, Israel	Researcher
1996 – 2000	Tel Aviv University, Tel Aviv, Israel	Adjunct Lecturer
1998 – 2002	Ariel University, Israel	Adjunct Lecturer

4. Offices in Academic Administration

Dates	Name of Institution and Department	Rank/Position
2018 – present	Afeka Academic College of Engineering, Tel Aviv, Israel	Member of the Safety Committee
2017 – present	Afeka Academic College of Engineering, Tel Aviv, Israel	Member of the Ethics Committee
2015 – present	Afeka Academic College of Engineering, Tel Aviv, Israel	Head, School of Mechanical Engineering
2015 – present	Afeka Academic College of Engineering, Tel Aviv, Israel	Member of Intellectual Property Committee
2012 – present	ACEHT - The Afeka Center for Energy and Heat Transfer	ACEHT Head
2012 – 2021	Afeka Academic College of Engineering, Tel Aviv, Israel	Head, M.Sc. Energy Engineering Program
2007 - present	Afeka Academic College of Engineering, Tel Aviv, Israel	Internal Assessor of applications to academic posts, promotion and tenure
2007 – 2012	Afeka Academic College of Engineering, Tel Aviv, Israel	Head, Department of Mechanical Engineering
2003 – 2007	Afeka Academic College of Engineering, Tel Aviv, Israel	Chairman of the Disciplinary Committee

5. Scholarly Positions and Activities outside the Institution

April 2023	Member of the Judging Panel – ESCO Israel Net Zero Energy Start-Up Competition
March 2023	Mentor of Sustainergy 7 Competition, Eilat-Eilot Renewable Energy Initiative
May 2022	Member of the Judging Panel – ESCO Israel Net Zero Energy Start-Up Competition

2021 – present	Academic Director, The National Engineers Forum, Management and Energy Saving
2021 – present	Academic Director, The National Energy Resource Managers Forum
2020 – present	Guest Editor, <i>Sustainability Buildings and Infrastructures Management Journal</i> , models strategies and evaluation tools
Feb. 2019	Mentor of Sustainergy 6 Competition, Eilat-Eilot Renewable Energy Initiative
Feb. 2018	Mentor of Sustainergy 5 Competition, Eilat-Eilot Renewable Energy Initiative
2016 – present	Academic Leader, Engineers Without Borders, Afeka Branch
2016 – 2019	Chairman of the Israeli branch of ISES (International Solar Energy Society)
Nov. 2016	Mentor of Sustainergy 4 Competition, Eilat-Eilot Renewable Energy Initiative
2014 – present	External Assessor of academic posts, promotion and tenure: Ariel University, Israel; Azrieli College of Engineering, Jerusalem, Israel
2012 – present	Member of the Energy Committee, Standards Institution of Israel
2011 – present	Chairman of the Energy Branch, Israel's Association of Engineers
1999 – present	Member of the Energy Professional Committee, Chairman of the Expert Committee – Collectors, Standards Institution of Israel

6. Participation in Scholarly Conferences

a. Active Participation

INTERNATIONAL

Date	Name of Conference	Place of Conference	Subject of Lecture /Discussion	Role
2023	17 th International Heat Transfer Conference	Cape Town, South Africa	Feasibility Study of a Novel, Solar Energy Based Desalination System	Lecturer
2023	11 th International Conference on Multiphase Flow,	Kobe, Japan	Device for Applying an Ophthalmic Medicament Mist	Lecturer
2022	IIASA-Israel Research Symposium on Sustainability Pathways	Tel-Aviv University	Is it possible for Israel to achieve 100% Renewables in 2050?	Lecturer

	empowered by Systems Analysis			
2019	8 th Annual International Conference on Sustainable Energy and Environmental Sciences (SEES 2019) ISSN: 2251-189X	Singapore	Energy efficiency of lighting systems in medical centers	Lecturer
2018	9 th Symposium of Turbulence, Heat and Mass Transfer, THMT 2018	Rio de Janeiro, Brazil	Flow field measurements of a round jet impinging on smooth and dimpled surfaces	Lecturer
2017	EVS30 Symposium	Stuttgart, Germany	Personal EV answering mega-cities transportation challenges	Lecturer
2016	Seminar at the Faculty of Mechanical, Maritime and Materials Engineering (3mE), Delft University of Technology	The Netherlands	The recently developed M.Sc. curriculum in engineering	Lecturer
2001	4 th International Conference of Multiphase Flow	New Orleans, USA	Flow distribution of gas and liquid in parallel pipes	Lecturer
1998	3 rd International Conference of Multiphase Flow	Lyon, France	Flow distribution of gas and liquid in parallel pipes	Lecturer
1997	7 th International Conference of Thinking	Singapore	Inventive thinking in education.	Lecturer
1995	2 nd International Conference of Multiphase Flow	Kyoto, Japan	Instability and non-uniformity of two-phase flow in parallel pipes	Lecturer

NATIONAL

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
2023	Sustainable Independent Urban Areas	Tel Aviv University, Israel	"Hashmel 100"	Lecturer
2022	Switch to 100% Electricity from	Expo, Tel Aviv	Can Israel rely on 100% renewable	Invited Lecturer

	Renewable Energy, Create a Work Plan		energy in the production of electricity?	
2021	Afeka 7 th Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy management in Hospitals/	Lecturer
2019	Afeka 5 th Smart Energy Conference: Energy in Romania & Israel	Afeka Academic College of Engineering, Tel Aviv	Can the State of Israel in year 2030 rely on 100% renewable energy in the production of electricity?	Invited lecturer
2016	Tel Aviv University Conference	Tel Aviv University	Solar decathlon, energy monitoring in buildings	Invited lecturer
1994	25 th Israel Conference on Mechanical Engineering	Technion – Israel Institute of Technology, Haifa	Instability and non- uniformity of two- phase flow in parallel pipes	Lecturer

b. Organization of Conferences and Sessions

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
Dec. 17-19 2023	Eilat-Eilat Renewable Energy Conference	Eilat, Israel	Renewable Energy	Member of Organizing and Scientific Committee
March 13, 2023	Moving to 100% green electricity	Expo, Tel Aviv	Green Electricity	Chair
February 6, 2023	Sustainable Independent Urban Areas	Tel Aviv University, Israel	Sustainable Independent Urban Areas	Member of Organizing and Scientific Committee
April 11, 2022	Afeka 8 th Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy Storage: Challenges and Opportunities	Chair

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
March 21, 2022	Switch to 100% Electricity from Renewable Energy, Create a Work Plan	Expo, Tel Aviv	100% electricity from renewable	Chair
April 20, 2021	Afeka 7 th Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Residential Smart Building Energy	Chair
October 22, 2020	Energy Efficiency in Air Conditioning 2	Webinar	Energy efficiency in air conditioning	Chair
September 14, 2020	Energy Efficiency in Air Conditioning 1	Webinar	Energy efficiency in air conditioning	Chair
June 24, 2020	Compressed Air Energy Management	Webinar	Compressed Air Energy Management	Chair
September 22, 2019	Afeka 6 th Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy in Israel 2030	Chair
June 19, 2019	Afeka 5 th Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy in Romania & Israel	Chair
October 9-10, 2018	35 th Israeli Conference on Mechanical Engineering	Ben-Gurion University of the Negev, Be'er Sheva, Israel	Mechanical Engineering	Member of Organizing and Scientific Committee
April 24, 2018	H2020-MSCA-RISE-2014 GA n° 645694 4 th Workshop	Afeka Academic College of Engineering, Tel Aviv, Israel	Support Tool for Energy Efficiency pRograms in medical centers (STEER)	Chair
April 23, 2018	Afeka 4 th Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy Efficiency and Green Building	Chair

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
April 25, 2017	Afeka 3 rd Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy Management and Efficiency	Chair
November 22-23, 2016	34 th Israeli Conference on Mechanical Engineering	Technion – Israel Institute of Technology, Haifa, Israel	Mechanical Engineering	Member of Organizing and Scientific Committee
September 20, 2016	Natural Gas in Israel: Present and Future	Bar-Ilan University, Israel	Natural Gas in Israel	Member of Organizing Committee
February 10, 2016	H2020-MSCA-RISE-2014 GA n° 645694 First Workshop	Afeka Academic College of Engineering, Tel Aviv, Israel	Support Tool for Energy Efficiency Programs in medical centers (STEER)	Chair
February 9, 2016	Afeka 2 nd Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Tools for Energy Efficiency	Chair
March 2015	Afeka 1 st Smart Energy Conference	Afeka Academic College of Engineering, Tel Aviv, Israel	Extremely Energetic	Chair
March 2-3, 2015	33 rd Israeli Conference on Mechanical Engineering	Tel Aviv, Israel	Mechanical Engineering	Member of Organizing and Scientific Committee
November 21, 2013	Best Available Techniques	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy Conference	Chair
April 25, 2013	Energy – Economy & Regulation	Afeka Academic College of Engineering, Tel Aviv, Israel	Energy – Economy & Regulation	Chair

Date	Name of Conference	Place of Conference	Subject of Lecture/Discussion	Role
February 28, 2013	Renewal in Energy Consumption	Afeka Academic College of Engineering, Tel Aviv, Israel	Renewal in Energy Consumption	Chair
October 17-18, 2012	32 nd Israeli Conference on Mechanical Engineering	Tel Aviv University, Israel	Mechanical Engineering	Member of Organizing Committee
February 22, 2012	Residual Energy in Industry	Afeka Academic College of Engineering, Tel Aviv, Israel	Residual Energy in Industry	Chair
June 2-3, 2010	31 st Israeli Conference on Mechanical Engineering	Tel Aviv, Israel	Mechanical Engineering	Member of Scientific Committee

7. Research Grants

a. Grants Awarded

During the last decade 2010 - 2022

Role in Research	Co-Researchers	Topic	Funded by/Amount	Year
Co-I (representing H.T. Bioimaging)	Assaf Gur Gabriel Polliack Sharon Gat	Cancer Detection	Horizon 2020 emerging companies €600,000	2019 – 2021
Co-I (representing Afeka)	David Berla Sharon Gat Jorge Casillas Athanasios Kalogeras Christos Anagnostopoulos Daniele Liberanome Luca Ferrarini Giacomo Di Benedetto George Kalogeras Marek Trojanowicz Mateusz Marmolowski	Support tool for energy efficiency programs in medical centers (STEER)	Horizon 2020 – Research and Innovation Framework Program, Marie Sklodowska-Curie action, €1,206,000 (€54,000 for Afeka Academic College of Engineering)	2014 – 2018

Non-Research Grants

Role in Grant	Team members	Topic	Funded by/Amount	Year
Team member	David Berla	Pioneer and demonstration facilities	Ministry of Energy 300,000 NIS	2017 – 2018

Fundraising for engineering start-up companies led by Dr. Moshe

Tshuva

Money raised for technology companies that I initiated or was a senior partner in the initiative.

During the last decade 2010 - 2022

Role	Team members	Topic	Funded by/Amount	Year
Co-I (representing H.T. Bioimaging)	Assaf Gur Gabriel Polliack Sharon Gat	Cancer Detection	Colfax \$10,000,000	2022 – 2027
PI (representing Tethys)	Josh Altman	Solar Desalination	Private investors \$3,000,000	2022 – 2025
Co-I (representing H.T. Bioimaging)	Assaf Gur Gabriel Polliack Sharon Gat	Cancer Detection	Private investors & venture capital funds \$2,000,000	2015 – 2021
PI (representing Tethys)	Josh Altman Niv Eliyahu	Solar Desalination	Private investors & Exit Valley fund \$1,000,000	2014 – 2019
Co-I (representing H.T. Bioimaging)	Assaf Gur Gabriel Polliack Sharon Gat	Cancer Detection	Israel Innovation Authority, Tnufa and R&D funds \$2,000,000	2014 – 2018
PI (representing MeWay)	Eran Eilat Josh Altman	UltraFlow Nebulizer	Israel Innovation Authority, Sanara Innovation Incubators \$3,000,000	2014 – 2018

Role	Team members	Topic	Funded by/Amount	Year
PI (representing AO Pharma)	Eran Eilat Josh Altman	Dispensing preservative- free medicinal products	Israel Innovation Authority, Tnufa and R&D funds \$2,640,000	2010 – 2012

b. Submission of Research Proposals – Pending

Role in Research	Co-Researchers	Topic	Funded by	Year
Co-I	Mater scarl - ITALY CNR-ICB - ITALY SUNLAB GROUP – MALTA	Development of new circular economy strategies for energy valorization and production of food supplements for healthy ageing from olive oil production chain waste	MOST: Israel- Italy collaborat ion	2023
Co-I	Gadi Golan	VGrow - Novel Approach to Food Security	Afeka - Ariel	2023
Co-I	Itay Sened Erel Avineri	The economic viability of turning organic waste into biogas for heating public and private homes, in urban environments	Ministry of Environm ental Protection	2022
Co-I	Region of Thessaly (LP- GR) Athena Research Center (GR) EGTC Efxini Poli (GR) CUEIM (IT) Svi.med (IT)	Digital Solutions for Innovative Farming – DigInnovFarming	Horizon 2020 Framewor k Program me	2022

	ENEA (IT) Living Prospects (Belgium) Critt (FR) University of Granada (ES) San Sebastian SCA - Association of farmers in Southern Spain (ES) Olive oil Association of Boka (Montenegro)			
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c. Submission of Research Proposals – Not Funded

Role in Research	Co-Researchers	Topic	Funded by	Year	Score
Co-I	Daniele Liberanome Dario Ticali Erel Avineri Antonio Rossi Franceca Di Gaudio Chiara Corrado Eugenio Cottone	AcuPuncture IntervenTions for requalification of urban degraded areaS and design of new connecTiOn sPots	Horizon 2020 Framework Programme	2020	78 out of 100

8. Scholarships, Awards and Prizes

- 2023 Brian Medved Award at the 2023 Eilat Eliot Renewable Energy Conference. For his contribution to strengthening the field of clean energy in academia.
- 2020 EIT Health Fund Award for H.T. Bioimaging

- 2019 Award for completed IBM Alpha Zone accelerator project with IBM-Watson (€550K) - cancer detection system.
- 2019 1st place in Intel Alumni's Next-Leap-Ventures competition - cancer detection system
- 2019 10 Most Advanced Medical Imaging Solution Providers list of InsightsCare - cancer detection system
- 2018 WeWork Creator Awards Winner, Jerusalem (\$75K) – Solar desalination system
- 2017 3rd place at FoodTech Startup Pitch in Tel Aviv
- 2016 MedTech Accelerator Award - cancer detection system
- 2015 – 2020 Management & Teaching Excellence Prize, Afeka Academic College of Engineering, Tel Aviv
- 2015 Tnufa Kickoff Grant – to develop a cancer detection system
- 2014 Tnufa Kickoff Grant - for the development of the UltraFlow Nebulizer system
- 2012 Tnufa Kickoff Grant – for the development of a system of dispensing drugs without preservatives
- 2007 Creative Thinking Award, Israeli Ministry of Defense (Mafat)
Confidential project - the thermal design of the system
- 2006 – 2014 Teaching Excellence Prize, Afeka Academic College of Engineering, Tel Aviv

9. Teaching

a. Courses Taught in Recent Years

Year	Name of Course	Type of Course Lecture/Seminar/Workshop/ Introduction Course (Mandatory)	Degree	Number of Students
2020 – 2021	Thermal Energy Conversion	Lecture	M.Sc.	~15
2019 – present	Intelligent Systems - Smart Cities	Seminar	M.Sc.	~18
2018 – present	Renewable Energy and Public Policy	Seminar	B.Sc.	~12
2018 – present	Sustainable Development	Seminar	B.Sc.	~12
2015 – present	Engineering from Principle to Practical	Seminar	B.Sc.	~20
2013 – 2021	Energy Balances Laboratory	Laboratory	M.Sc.	~15
2008 – 2012	Thermal Cooling of Electronic Equipment	Lecture	B.Sc.	~40
2005 – 2008	Systematic Inventive Thinking	Lecture	B.Sc.	~50
2004 – 2011, 2020	Thermodynamics 1	Lecture	B.Sc.	~100 annually
2001 – 2012	Thermodynamics 2	Lecture	B.Sc.	~100 annually
1997 – present	Heat Transfer	Lecture	B.Sc.	~150 annually

b. Supervision of Graduate Students

Name of Student	Title of Thesis	Degree	Academic institution	Date of Completion /in Progress	Students' Achievements
Sivan Levi	Improving the efficiency of pumped storage facilities hydropower by redesign Francis turbine runner adapted to different flow rate With Dr. Milad Hamisa	M.Sc.	Afeka Academic College of Engineering	2022 in Progress	
Micky Carmel	Reducing greenhouse gas emissions in industry by 2050 With Prof. Ofira Ayalon	M.Sc.	Haifa University	2022 in Progress	
Ronen Eran	The potential of renewable energies shares in the Israeli electricity sector in 2050 With Dr. Gur Mitelman	M.Sc.	Afeka Academic College of Engineering	2022	Conference Lecture
Dekel Keisar	Design of low-speed turbine blades from composite materials With Prof. Amos Ullmann	M.Sc.	Tel-Aviv University	2015	Designed for UAV planning

c. Supervision of Projects of Graduate Students

Name of Student	Title of Thesis	Degree	Date of Completion/in Progress	Students' Achievements
Igal Uchitel	Passive cooling – convenience or a solution to the climate crisis?	M.Sc.	2023 in Progress	
Yehuda Buju	Centrifugal pump for agriculture irrigation	M.Sc.	2022	Based on the work, software was developed for the purpose of providing an optimal set of pumps

Name of Student	Title of Thesis	Degree	Date of Completion/in Progress	Students' Achievements
Yaakov Sofi	Electricity consumption monitoring for increased energy efficiency	M.Sc.	2021	The student works on product development
Niv Eliyahu	Solar water desalination system	M.Sc.	2019	System engineering of a startup
Ben Moha Nizan, Arzuan Mickey	Can the State of Israel in year 2030 rely on 100% renewable energy in the production of electricity?	M.Sc.	2018	Conference Lecture
Eyal Guttentag	Optimization of energy supply for air conditioning and heating systems in hotels	M.Sc.	2017	Conference Lecture
Alina Larin	Improving energy performance by enhancing reliability of process control	M.Sc.	2015	Used for efficient engineering planning of petrochemical plants
Boaz Glass, Rani Ammar	Energy efficiency of system in Meir Medical Center	M.Sc.	2015	Conference Lecture
Leonardo Cohen	Energy efficiency improvement of PRMS facilities	M.Sc.	2014	Used by Israel Natural Gas Lines for PRMS design
Erez Levy, Rabi Ganem	Pre-conditioned air systems for aircraft at Ben Gurion International Airport	M.Sc.	2013	Part of energy efficiency at Ben Gurion International Airport
Nisan Yacobi	Evaluation of air pollution from Tel Aviv University mobile car in the main entrances of Tel Aviv University	M.Sc.	2002	

d. External Examiner of Graduate Students

Name of Student	Title of Thesis	Degree	Date of Completion/in Progress	Students' Achievements
Oran Livne	Evaluation of effectiveness of microchip destruction using Thermite	M.Sc.	2023	Technion – Israel Institute of Technology, Haifa
Ben Aviad Shalom	Optical and electrical performance of an agrivoltaic field with spectral beam splitting	M.Sc.	2023	Tel-Aviv University
Shahaf Baron	Agrivoltaic solar collectors with spectral beam splitting	M.Sc.	2023	Tel-Aviv University
Ohad Aviram	Investigation of the potential to reduce the impact on electric grid by incorporating a heat pump in EV's	M.Sc.	2022	Tel-Aviv University
Adi Amir	Design and optimization of an air-conditioning system based on nocturnal radiative cooling for small-scale data centers: thermal and economic aspects	M.Sc.	2017	Technion – Israel Institute of Technology, Haifa

Patents (granted)

1. Toledano Shani [IL], Rosenbach Yoav [IL], Tshuva Moshe [IL], Gat Sharon [IL], A device and method for cancer detection, diagnosis and treatment guidance using active thermal imaging, Patent no.: US2017027450 (A1), Year patent granted: 2017.
2. Emmerich Ziev Yosef [GB], Tshuva Moshe [IL], Altman Joshua [IL], Device for treating contaminated water, Patent no. WO2016120865 (A1), Year patent granted: 2016.
3. Burstein Pinchas [IL], Altman Joshua [IL], Tshuva Moshe [IL], Medical applicator, Patent no.: US2015246212 (A1), Year patent granted: 2015.
4. Schoenfeld Alexander [IL], Neshet Yaco [IL], Altman Joshua [IL], Tshuva Moshe [IL], Combustible fluid fuel, Patent no.: US2013067924 (A1), Year patent granted: 2013.
5. Eliachar Eliahu [IL], Eilat Eran [IL], Altman Joshua [IL], Tshuva Moshe [IL], A two-step multi-dose medicament dispenser, Patent no.: WO2012101634 (A3); WO2012101634 (A2), Year patent granted: 2012.
6. Eilat Eran [IL], David Robert [US], Altman Joshua [IL], Tshuva Moshe [IL], Device for applying an ophthalmic medicament mist, Patent no.: US2012179122 (A1), Year patent granted: 2012.
7. Tshuva Moshe [IL], Altman Joshua [IL], Apparatus and method for imaging integrated circuits and the like, Patent no.: WO2007088552 (A9); WO2007088552 (A1), Year patent granted: 2007.
8. Altman Joshua [IL], Tshuva Moshe [IL], Leshem Zeev [IL], Haas Nadav [IL], Kerner Avi [IL], Lederer Udi [IL], Detection of imperfections in precious stones, Patent no.: US2005117145 (A1), Year patent granted: 2005.

10. Professional Experience

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| 2021 – present | Heat Transfer Expert, Production of green hydrogen, design of heat exchange systems and efficient energy management. H2Pro, Caesarea, Israel |
| 2021 – present | Heat Transfer Expert, An examination of the next generation of energy management for electronic systems and big data storage systems, NVIDIA international |
| 2016 – 2020 | Heat Transfer Expert, Thermal design of electronic systems for a UAV, Meteor Aerospace, Israel |

- 2016 – 2018 CSO, Heat Transfer Expert, Development of a water freezing system for efficient energy utilization, Nostromo, Israel
- 2016 – 2018 Thermodynamics & Heat Transfer Expert, Development of the new generation of water bar system, Strauss Group Water, Israel
- 2015 – present CSO, Thermodynamics & Heat Transfer Expert, Development of an off-grid system for solar desalination Tethys – Solar Desalination, Israel
- 2014 – 2019 Thermodynamics & Fluid Mechanics Expert, mist application development of the UltraFlow Nebulizer system MeWay, Caesarea, Israel
- 2013 – present Heat Transfer Expert, Cancer detection using IR camera, H.T. Bioimaging, Israel
- 2013 – 2014 Heat Transfer Expert, Thermal design of electronic systems for a UAV, IAI, Israel
- 2009 – 2011 Thermal Engineering Expert Consultant, Thermal design of battery charging system for Better Place, Nekudadm, Tel Aviv, Israel
- 2009 – 2010 Thermal & Fluid Mechanics Engineer Expert, Solving thermal and mechanical problems in ultra-pure water pipeline at Intel Factory Mwgrou, Rehovot, Israel
- 2009 – 2010 Thermal Engineering Expert, solving thermal problems in designing oven and contractions in the production of Dry-Fit shirts, Tefron Ltd., Teradion Industrial Zone, Israel
- 2008 – 2010 Thermal & Fluid Mechanics Engineer Expert, User-friendly mist application of preservative-free ophthalmic drug. Aopharma, Tel Aviv, Israel
- 2007 – 2008 Thermal & Fluid Mechanics Engineer Expert, Cox-maze procedure for atrial fibrillation disorder. Thermal design of heat exchanger for cryogenic flows. CardioNova, Ariel, Israel
- 2005 – 2010 Thermal Engineering Expert, solving thermal problems in designing Integrated Circuits. Motorola Israel, Tel Aviv, Israel
- 2005 – 2006 Thermal & Fluid Mechanics Engineer Expert, Water treatment technology combining ultraviolet (UV) disinfection with advanced hydraulics, Atlantium Ltd., Har Tuv Industrial Park, Israel
- 2004 – 2007 Thermal Engineering Expert, ODF Ltd., Tel Aviv, Israel

- 2003 – 2006 Thermal Engineering Expert, Field surveillance system specially designed for rapid deployment and real-time intelligence. Sarin Ltd., Tel Aviv, Israel
- 1999 – 2008 Facilitator and Trainer, New product development and problem solving. Detection of imperfections in precious stones, S.I.T, Tel Aviv, Israel
- 1993 – 2017 CSO, 4ID Ltd., Tel Aviv, Israel
- 1983 – 1986 Developing Engineer and Projects Director on several classified projects, IDF, Israel