

Name YUVAL DORFAN Ph.D. 029505484
 (first) (last) (acad. degree) **No. id. Card**

Faculty Electric and Electronics Engineering **Department** _____

Home Address 13a Dalya Avenue, Ness-Ziona **Phone No.** _____ **052-6180329**
 (home) (work) (mobile)

Date/place of birth 19/7/1972 Israel **Date of arrival in Israel** _____
 (date) (country)

ZAHAL, (Israeli) Military Service 21/11/1990 - 6/10/1994
 dates (enlisted) (discharged)

Marital Status Married **No. of children** four

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A. EDUCATION

Period of Study (dates)	Name of University (including city and country if not in Israel)	Subject	Degree or Professional Licence	Date of Award
1994-1998	Electrical and Computer Engineering Ben-Gurion University of the Negev	Signal Processing, Communication and Control	B.Sc.* <i>summa cum laude</i>	1/7/1998
1998-2001	Technion – Israel Institute of Technology	Electrical Engineering	M.Sc. <i>magna cum laude</i>	1/2/2001
2005-2007	Interdisciplinary Center Herzliya (now Reichman University)	Entrepreneurship	MBA	1/5/2007
10/2013-8/2017	Bar-Ilan University	Signal Processing	Ph.D.	31/7/2017

*Supervised by Prof. Israel Rotman; Dr. Ayelet Pneuili

Title of Master's Thesis: Modeling and identification of LPTV systems by wavelets

Title of MBA Thesis: Mediocheck for acoustic sensing of pneumonia for babies (Entrepreneur of a new company)

Name of Supervisors: Prof. Arie Feuer, The Late Prof. Boaz Porat (*M.Sc. Thesis*)

Title of Doctoral Dissertation: Distributed localization and tracking of acoustic sources

Names of Supervisors: Prof. Sharon Gannot

B. FURTHER STUDIES

Period of Study (dates)	Name of University (including city and country if not in Israel)	Subject	Degree or Professional Licence	Date of Award
NONE				

C. ACADEMIC AND PROFESSIONAL EXPERIENCE**Academic:**

Period (dates)	Name of Institution (city, country)	Department	Rank/Function
1998-2001	Technion – Israel Institute of Technology, Haifa, Israel	Electrical Engineering	Teaching Assistant/ Projects Supervisor ^①
2006-2011	Weizmann Institute of Science, Rehovot, Israel	Molecular Genetics	Assistant ^②
2013-2017	Faculty of Engineering, Bar-Ilan University, Ramat Gan, Israel	Speech and Signal Processing Laboratory	Ph.D. research and studies ^③
2017-2020	MIT, Cambridge, MA, USA	Voigt Laboratory in Biological Engineering	Research Scientist ^④

^①

- Leading signal processing research of students from Israel and Europe
- Teaching Assistant – two courses
- Projects supervision in signal and image processing in academic and industrial areas (Applied Materials, Nahal Sorek, Elbit, etc.). One of the projects was awarded a prize

^②

- Research in bioinformatics
- MATLAB course for graduate students

^③

- Development of new distributed expectation-maximization (EM) algorithms for acoustic source localization, tracking and source separation
- Cooperation with industry and other research groups in Israel, Europe, UK and Singapore, including visits to Grenoble and London
- Raising money from industry and other funding sources
- Supervision of master students

^④

- Managing a DARPA research project, Synergistic Discovery and Design (SD2):
 - Managing four research groups (MIT, Broad Institute, Utah University, Boston University) on a few research tasks (Bio-cyber-security, genetic circuits, RNA-seq, soil bacteria design and various software (SW) tools for synthetic biology)
 - Weekly meetings with researchers from academia and industry (various locations in America)
- Initiating and managing a 1M\$ project as a collaboration between Israel and MIT: Soil project for agriculture
- Co-founding ISI in RU, Herzliya, Israel with Prof. Chris Voigt, Dr. Ben Gordon and other partners

C. ACADEMIC AND PROFESSIONAL EXPERIENCE, contd.**Academic:**

Period (dates)	Name of Institution (city, country)	Department	Rank/Function
2020-2022	Innovation Center, Reichman University, Herzliya, Israel	Israeli SynBio Institute (ISI)	Initiator, Director ⁵
1/10/2022-	HIT – Holon Institute of Technology, Holon, Israel	Electric and Electronics Engineering	Equivalent to Senior Lecturer/ Founder of Bio-convergence Excellence Center⁶

⁵

- Founding Director of ISI as part of the Innovation Center, in close partnership with Prof. Noam Lemelshtrich Lатар and Dr. Jonathan Giron
- Leading integrative applied research in IDC with multiple schools: Law, communication, computer science, etc.
- Grants and papers with industry and academia, including ZMI, with Prof. Dov Greenbaum and other Principal Investigators from universities in Israel and abroad
- Holistic research to enable new companies including old landmine detection and biochip to monitor air/water contaminations
- Founding Alagene, the first Israeli bio-foundry with hylabs (a bio-tech company from Rehovot) and Michael Eisenberg (private funder) supported by the Israeli Innovation Authority (IIA), who declared it as a national facility for SynBio local community, with an initial budget of 40Mnis for a ramp-up phase of two years

⁶

- Teaching in courses of electrical engineering, Signal and systems and advanced image processing
- Leading a new M.Sc. track in bio-convergence
- Leading integrative applied research
- Grants and papers with industry and academia, including ZMI, Prof. Dov Greenbaum and other Principal Investigators from universities in Israel and Israel
- Holistic research to enable new companies, including old landmine detection and biochip to monitor air/water contaminations
- Advisor to Alagene, the first Israeli bio-foundry supported by the Israeli Innovation Authority (IIA), who declared it as a national facility for SynBio local community with an initial budget of 40Mnis for a ramp-up phase
- Supervision of undergraduate and graduate students' projects, including Ph.D. and Master's degrees in collaboration with the Hebrew University of Jerusalem, Ben-Gurion University of the Negev, and Ariel University

Professional:

Period (dates)	Name of Institution (city, country)	Department	Rank/Function
2001-2006	Comsys Communication & Signal Processing (now Intel), Herzliya, Israel	Cellular Communication Projects	Team Leader/ Senior PHY Engineer ⁷
2004-2005	Negevtech, Rehovot, Israel	R&D	Project Manager/ Team Leader ⁸

⁷

- Recruiting, training and managing team
- Algorithms research, development and implementation
- Cooperation with academy (Technion, Tel-Aviv University, Ben-Gurion University of the Negev) and companies (Rafael, Allvarion, etc.)

⁸

- Recruiting, training and managing team
- Innovative R&D in image processing, including a patent
- Responsibility for multidisciplinary project (SW, HW, optics and application)

C. ACADEMIC AND PROFESSIONAL EXPERIENCE, contd.**Professional:**

Period (dates)	Name of Institution (city, country)	Department	Rank/Function
2007-2008	Intel, Haifa, Israel	System Engineering Wimax	In charge of WiFi project ^⑨
2008-2009	Telesen, Rosh- Ha'ayen, Israel	Research and Development	Manager ^⑩
2009-2017	Israel Aerospace Industries (AI), Beer Yaacov, Israel	Signal Processing & Communication	Algorithms & Systems Engineer ^⑪

⑨

- Definition of multi-standard communication system
- Leading integration stages including automatic calibrations algorithms

⑩

- Leading a wrist pulse measurement project by optics and acceleration sensor
- Recruiting a team system definition and algorithms development
- Patents mapping, interactions with other companies and academia (Technion, Ben-Gurion University)

⑪

- Planning RF communication systems
- Development of signal processing algorithms for communication, acoustics, GPS, etc.
- Projects supervision in signal processing with Tel-Aviv University

D. PROFESSIONAL AND PUBLIC ACTIVITIES

Period (dates)	Name of Institution/Conference/ Journal/Exhibitions/Projects (city, country)	Occasion
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NONE

D1. INVOLVEMENT IN HIT INSTITUTIONAL ACTIVITIES

Period (dates)	Occasion
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NONE

**E. ACADEMIC AND PROFESSIONAL AWARDS
(prizes, fellowships, scholarships, etc.)**

Year	Name of Institution (city, country)	Occasion
2014	Hands-free Speech Communication and Microphone Arrays (HSCMA 2014), Villers-les Nancy, France, 12-14 May 2014	Best Paper Award: Multiple acoustic sources localization using distributed expectation-maximization algorithm

Name: Yuval Dorfan, Ph.D.

Holon Institute of Technology
Date: 2nd August 2023

5

**E. ACADEMIC AND PROFESSIONAL AWARDS, contd.
(prizes, fellowships, scholarships, etc.)**

Year	Name of Institution (city, country)	Occasion
2017	Bar-Ilan University, Ramat Gan, Israel	Best Paper Award: Distributed localization and tracking of acoustic sources

E1. RESEARCH GRANTS

Year	Name of Institution (city, country)	Occasion/Amount
2021	Reichman University, Herzliya, Israel	Israeli Department of Defense Amount: 400K NIS per year
2021	Reichman University, Herzliya, Israel	Israeli Innovation Authority Amount: 40M NIS for two years

F. MEMBERSHIP IN PROFESSIONAL SOCIETIES

Year	Society (country)
2017-	SD2, SynBio, USA
2021-	Israeli SynBio Association (ISA), Israel

G. STUDENTS SUPERVISED BY CANDIDATE

HIT – Holon Institute of Technology does not currently have an accreditation for granting research theses (M.Sc.) or Dissertation (Ph.D.) degrees

G1. DOCTORAL STUDENTS

Year	Name of Student	Title of Thesis	Name of Academic Institution
2023-	Yonatan Cohen	⊛	Hebrew University, and HIT – Holon Institute of Technology
2023	El-Or Sharoni	Plastic bio-degradation	Ariel University and HIT – Holon Institute of Technology

⊛ to be announced

G2. M.A./M.Sc. STUDENTS (please indicate if degree is with "thesis" or "final project")

Year	Name of Student	Title of Thesis/Final Project	Name of Academic Institution
2023	Oria Zahari Teena	THESIS: Corrosion detection	Ben-Gurion University of the Negev and HIT – Holon Institute of Technology

PUBLICATIONS

C. REFEREED ARTICLES

1. Y. Dorfan, A. Feuer, B. Porat
Modeling and identification of LPTV systems by wavelets
Signal Processing, 84(8), 2004 (1285-1297)
WoS: Q2, IF: 4.729, JCR citations: 10
SCImago: Q1, h-index: 144, Scopus citations: 14
[Google scholar citations: 22]
2. T. Tuller, A. Carmi, K. Vestsigian, S. Navon, Y. Dorfan, J. Zaborske, T. Pan, O. Dahan, Furman, Y. Pilpel
An evolutionarily conserved mechanism for controlling the efficiency of protein translation
Cell, 141(2), 2010 (344-354)
WoS: Q1, IF: 66.850, JCR citations: 574
SCImago: Q1, h-index: 814, Scopus citations: 584
[Google scholar citations: 882]
3. Y. Dorfan, S. Gannot
Tree-based recursive expectation-maximization algorithm for localization of acoustic sources
IEEE/ACM Trans. on Audio, Speech, and Language Processing, 23(10), 2015 (1692-1703)
WoS: Q1, IF: 4.364, JCR citations: 34
SCImago: Q1, h-index: 60, Scopus citations: 35
[Google scholar citations: 53]
4. Y. Dorfan, A. Plinge, G. Hazan, S. Gannot
Distributed expectation-maximization algorithm for speaker localization
in reverberant environments
IEEE/ACM Trans. on Audio, Speech, and Language Processing, 26(3), 2017 (682-695)
WoS: Q1, IF: 4.364, JCR citations: 16
SCImago: Q1, h-index: 60, Scopus citations: 17
[Google scholar citations: 16]
5. P. Fontanarrosa, H. Doosthosseini, A.E. Borujeni, Y.I. Dorfan, C.A. Voigt, C. Myers
Genetic circuit dynamics: Hazard and glitch analysis
ACS Synthetic Biology, 9(9), 2020 (2324-2338)
WoS: Q1, IF: 5.249, JCR citations: 10
SCImago: Q1, h-index: 74, Scopus citations: 11
[Google scholar citations: 22]
6. Y. Dorfan, O. Schwartz, S. Gannot
Joint speaker localization and array calibration using expectation-maximization
EURASIP J. on Audio, Speech, and Music Processing, Vol.2020, 2020 (1-19)
WoS: Q2, IF: 2.114, JCR citations: 6
SCImago: Q2, h-index: 30, Scopus citations: 5
[Google scholar citations: 6]

C. REFEREED ARTICLES, contd.

7. Y. Dorfan, B. Schwartz, S. Gannot
Forward-backward recursive expectation-maximization for concurrent speaker tracking
EURASIP J. on Audio, Speech, and Music Processing, Vol.2021, 2021 (1-13)
WoS: Q2, IF: 2.114, JCR citation: 1
SCImago: Q2, h-index: 30, Scopus citation: 1
[Google scholar citation: 1]
8. M. Eslami, A.E. Borujeni, H. Eramian, M. Weston, G. Zheng, J. Urrutia, C. Corbet,
D. Becker, P. Maschhoff, K. Clowers, A. Cristofaro, H.D. Hosseini, D.B. Gordon, Y. Dorfan,
J. Singer, M. Vaughn, N. Gaffney, J. Fonner, J. Stubbs, C.A. Voigt, E. Yeung
Prediction of whole-cell transcriptional response with machine learning
Bioinformatics, 38(2), 2022 (404-409)
WoS: Q1, IF: 6.931, JCR citations: 2
SCImago: Q1, h-index: 415, Scopus citation: 1
[Google scholar citations: 5]
9. Y. Chemia, Y. Dorfan, A. Yannai, D. Meng, P. Cao, S. Glaven, D.B. Gordon,
J. Elbaz, C.A Voigt
Parallel engineering of environmental bacteria and performance over years
under jungle-simulated conditions
PLoS One, 17(12), 2022 (e0278471)
WoS: Q2, IF: 3.752
SCImago: Q1, h-index: 367

D. CHAPTERS IN BOOKS

1. N. Dalal, Y. Oren, Y. Dorfan, J. Gioron, R. Puzis
The attack surface of web lab automation
in: *Cyberbiosecurity – A New Field to Deal with Emerging Threats*
D. Greenbbaum (ed.)
Springer Cham. 2023 (279-304)
ISBN: 978-3-031-26033-9

E. PAPERS PRESENTED AT SCIENTIFIC MEETINGS PUBLISHED IN PROCEEDINGS

1. Y. Dorfan, G. Hazan, S. Gannot
Multiple acoustic sources localization using distributed expectation-maximization algorithm
4th Joint Workshop on Hands-free Speech Communication and
Microphone Arrays (HSCMA 2014)
Villers-les-Nancy, France, 12-14 May 2014 (72-76)
Best Paper Award
JCR citations: 15
Scopus citations: 15
[Google scholar citations: 14]
2. G. Zilberman, A. Kleinerman, Y. Chipman, Y. Dorfan
A comparison of frequency offset estimators for burst communication systems
GSPx Conf., Santa Clara, CA, USA, 27-30 September 2004

E. PAPERS PRESENTED AT SCIENTIFIC MEETINGS PUBLISHED IN PROCEEDINGS, contd.

3. Y. Dorfan, D. Cherkassky, S. Gannot
Speaker localization and separation using incremental distributed expectation-maximization
23rd European Signal Processing Conf. (EUSIPCO 2015)
Nice, France, 31 August-4 September 2015 (1256-1260)
JCR citations: 7
Scopus citations: 9
[Google scholar citations: 9]
4. Y. Dorfan
Speaker localization with moving microphone arrays
European Signal Processing Conf. (EUSIPCO 2016)
Budapest, Hungary, 29 August-2 September 2016 (1003-1007)
JCR citations: 7
Scopus citations: 8
[Google scholar citations: 8]
5. O. Schwartz, Y. Dorfan, E.A.P. Habets, S. Gannot
Multi-speaker DOA estimation in reverberation conditions using expectation-maximization
IEEE Int'l. Workshop on Acoustic Signal Enhancement (IWAENC 2016)
Xi'an, China, 13-16 September 2016 (1-5)
Scopus citations: 20
6. Y. Dorfan, O. Schwartz, B. Schwartz, E.A.P. Habets, S. Gannot
Multiple DOA estimation and blind source separation using estimation-maximization
IEEE Int'l. Conf. on the Science of Electrical Engineering (ICSEE 2016)
Eilat, Israel, 16-18 November 2016 (1-5)
JCR citations: 13
Scopus citations: 17
[Google scholar citations: 19]
7. O. Schwartz, Y. Dorfan, M. Taseska, E.A.P. Habets, S. Gannot
DOA estimation in noisy environment with unknown noise power using the EM algorithm
Hands-free Speech Communications and Microphone Arrays (HSCMA 2017)
San Francisco, CA, USA, 1-3 March 2017 (86-90)
JCR citations: 19
Scopus citations: 22
[Google scholar citations: 20]
8. C. Evers, Y. Dorfan, S. Gannot, P.A. Naylor
Source tracking using moving microphone arrays for robot audition
IEEE Int'l. Conf. on Acoustics, Speech and Signal Processing (ICASSP 2017)
New Orleans, LA, USA, 5-9 March 2017 (6145-6149)
JCR citations: 17
Scopus citations: 24
[Google scholar citations: 29]

E. PAPERS PRESENTED AT SCIENTIFIC MEETINGS PUBLISHED IN PROCEEDINGS, contd.

9. A. Hasnain, S. Sinha, Y. Dorfan, A.E. Borujeni, Y. Park, P. Maschhoff, U. Saxena, J. Urrutia, N. Gaffney, D. Becker, A. Siba, N. Maheshri, B. Gordon, C. Voigt, E. Yeung
A data-driven method for quantifying the impact of a genetic circuit on its host
IEEE Biomedical Circuits and Systems Conf. (BioCAS 2019)
Nara, Japan, 17-19 October 2019 (1-4)
JCR citations: 3
Scopus citation: 1
[Google scholar citations: 19]

H. OTHER PUBLICATIONS

H1. PATENTS

1. E. Sali, T. Yanir, M. Wagner, N. Dotan, Y. Dorfan, R. Zaslavsky
Method and apparatus for detecting defects in wafers
Patent No.: US 7,813,541 B2, Date of Patent: 12 October 2010
[Google scholar citations: 56]

H2. PATENT APPLICATION PUBLICATION

1. J. Rovinsky, D. Yuval
Missile vehicle communication unit
Israel Patent No.227279B, July 2018