

**Yaakov (Jonathan) Stein**  
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## Overview

- CTO of a major telecomm vendor, with expertise in:
  - 5G, SDN/NFV, pseudowires, QoS/OAM, MPLS, IPv6, synchronization
  - DSP (speech, software defined radio)
  - algorithms and machine learning
  - IPR (patents - drafting, portfolio and defense; Open Source)
  - interfacing with major service providers
- Active participant in International Standards Organizations (IETF, ITU, MEF), co-chair of IETF TICTOC WG
- Author of major Digital Signal Processing textbook
- BSc. in Mathematics/Physics, MSc. and PhD in theoretical physics (HUJI)
- Israel Defense Award (1992)

## Positions (non-academic) see also [LinkedIn profile](#)

2011-present: **CTO, [RAD Data Communications](#)**, Tel Aviv, Israel

Responsible for: tracking scientific and technological trends, core technology development and demos, designing communications protocols, IPR issues (drafting, portfolio and defense), participation in standards committees (ITU-T, IETF, MEF, etc.), representing RAD in conferences, and [training courses](#)

2016- 2019: **Chairman of the Board, [the Neptune Consortium](#)**

2014-2016: **cofounder, Neptune** - the Israel Consortium for Network Programming - consisting of 10 corporations and 8 academic institutions, researching SDN and NFV approaches to designing service provider networks

2000-2016: **Active participant in Standardization Forums**

**IETF:** Co-chair of [TICTOC](#) WG, Major contributor to [PWE3](#) WG

Coauthor of RFCs 4553, 5087, 5287, 5920, 6310, 7893, and numerous Internet Drafts  
Contributed to RFCs 3916, 4197, 4385, 4733, 4734, 4901, 5244, 5611, 5885, and 6669

**Member** of the Performance Metrics Directorate

**ITU-T:** Editor of Y.1413, Y.1418, Y.1452, Y.1453

Major contributor to Y.1414, Y.1415, Y.1731

1999-2011: **Chief Scientist, and Head of Advanced Technologies Department,**

**[RAD Data Communications](#)**, Tel Aviv, Israel

Responsible for: tracking scientific and technological trends, algorithm development (DSP for speech, fax, modem, telephony, timing recovery over packet networks, packet application classification, service performance estimation and enhancement, telecommunications security), participation in standards committees (IETF, ITU-T, MEF), evaluating IPR and drafting patents, innovation process, and training courses.

1995-1998: **Advanced Technology Manager**

1997-1998: **Digital Signal Processing Manager, Comverse Information Systems**

(Now [Verint Systems](#)) Woodbury, New York

Responsible for the development of advanced modem intercept and speech processing DSP for law enforcement and call center applications  
Developed web-based highly compressed multimedia archive server

- 1998: **Scientific consultant**, [Symbol Technologies](#), Holtsville, NY  
Developed prototype neural network for classification of bar-code images.
- 1989-1995: **Neural Network Applications Team-Leader**, **Efrat Future Technology Ltd.**  
(Afterwards **Comverse Technology**) Tel Aviv, Israel  
Developed state-of-the-art *OCR* (Optical Character Recognition) and *ASR* (Automatic Speech Recognition) applications based on neural network and artificial intelligence technologies
- 1986-1995: **Consultant to the Israel Ministry of Defense**  
Advised in the fields of digital signal processing, pattern recognition and applications of artificial neural networks  
1992: *Israel Defense Award* (פרס בטחון ישראל)
- 1980-1985: **Officer in the 8200 unit of the Israel Defense Forces** (rank: Major)  
Research scientist specializing in the exploitation of artificial intelligence techniques in digital signal processing for communications, radar, and command and control systems  
Participated in a large number of projects that were operationally deployed

**Academic** see also [ResearchGate profile](#), [Publications](#), and [Talks](#)

**Author of textbook: *Digital Signal Processing: A Computer Science Perspective***

Published by John Wiley and Sons, August 2000

<http://www.dspcsp.com/> <http://www.amazon.com/exec/obidos/ASIN/0471295469>

2008-2018: **Member of editorial board**, [International Journal of Network Management](#)

1999-now: **Adjunct, Computer Science Department**, [Tel Aviv University](#)

Responsible for the following [courses](#):

- [0368.3464](#): Digital Signal Processing Algorithms and Applications (CS 1<sup>st</sup> degree)
- [0510.7117](#): Fundamentals of 5G Mobile Communications (EE 2<sup>nd</sup> degree)
- [0510.6402](#): Fundamentals of Communications Networks (EE 2<sup>nd</sup> degree)
- [0368.4136](#): Digital Signal Processing for Computer Science Students (CS 2<sup>nd</sup> degree)
- [0368.4338](#): Advanced Seminar in DSP (CS 1<sup>st</sup> and 2<sup>nd</sup> degree)

2002-2011: **Adjunct Professor of Computer Engineering**, [Jerusalem College of Engineering](#)

Responsible for the following course:

- [10049](#): [Digital Signal Processing for Software Engineering students](#)

1995-1998: **Adjunct Professor of Computer Science**, [Polytechnic University](#), Farmingdale, NY

Responsible for the following courses:

- [CS392](#): [DSP for Computer Science students](#)
- [CS661](#): [Artificial Intelligence](#)
- [CS662](#): [Advanced AI](#)
- [CS667](#): [Neural Networks](#)

Developed AI and NN specialties for MSc. students

Lectured to industry on uses of AI and neural networks

1986-1989: **PhD. in theoretical physics** -- [Hebrew University of Jerusalem](#)

Thesis: *Capacity of Neural Network Models*

1978-1979: **MSc. in theoretical physics** - Hebrew University of Jerusalem

Thesis: *Critical Temperature for Superconductivity in the Transition metals*

1974-1977: **BSc. in physics, math and computer science** - Hebrew University of Jerusalem