

OLEG GOLDSHMIDT

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ABOUT (see also <https://www.goldshmidt.org>)

An experienced executive and a versatile and creative leader with a proven record of creating highly successful products from inception to long term maintenance. Wide experience in strategic product management, algorithms and data science, software and hardware development, systems, networks, cloud technologies, security, finance and trading. Equally comfortable with managing projects and teams, devising practical and innovative solutions, and working with demanding clients in various markets and industries. Excellent oral and written communication skills. Extensive teaching and industry training experience.

EMPLOYMENT HISTORY

2020 – Present: Principal Software Architect — Fortinet, Herzliya, Israel.

Fortinet provides comprehensive security solutions to enterprises, small and medium businesses, service providers, and government organizations around the world.

- Principal architect of next generation EDR/XDR product (deployed on millions of computers) and cloud (AWS, GCP, Azure, Kubernetes) workload protection product.
- Product Management: Analysis of competitive landscape, comparative analysis and prioritization of cloud workload protection features.
- Responsible for software design, implementation, delivery, and maintenance, including hands-on development at kernel (including eBPF), system and application level.
- Working directly with major enterprise customers on features and escalations.
- Product consulting on Deception Technology.

2018 – 2020: CTO — TrapX Security, Tel Aviv, Israel.

2014 – 2018: Director, Product Architecture.

TrapX Security (acquired by Commvault) is a pioneering vendor of Distributed Deception with hundreds of customers worldwide, including many household names.

- Senior company executive responsible for all the technology aspects of business strategy.
- Member of the executive team, involved in all the major decisions and planning of the company activities, reporting regularly to the Board of Directors.
- Principal architect of the company's DeceptionGridTM product deployable on enterprise premises, in industrial facilities, or in the cloud (AWS, Azure, GCP, OpenStack).
- Working closely with customers, partners, and all functions within the company.
- Internal and customer-facing documentation, presentations, lectures, training, etc.
- Responsible for the company's intellectual property development and patent activity.

2009 – 2013: Director, Research — TraderTools Inc., Raanana, Israel.

TraderTools provides a comprehensive FX trading platform aggregating liquidity from most of the world's top-tier banks and ECNs, smart order routing, pricing, white-labeling, and global order management.

- Key member of the Product Strategy team.
- Developed and implemented an algorithmic suite for market data aggregation, optimal order execution, pricing engine, algorithmic trading, etc.
- Responsible for critical technology choices for the company's products, including LightFX™ — the cloud (SaaS) liquidity aggregation solution.
- Working closely with dozens of customers (FX trading desks of the world's leading sell-side banks and brokerages) and with all functions within the company.

2007 – 2009: Director, System Architecture — Voltaire Ltd., Herzliya, Israel.

Voltaire Ltd. was a leading provider of InfiniBand and Ethernet interconnect solutions, software, and services (acquired by Mellanox Ltd., now a part of NVIDIA). Clients included the world major banks, hedge funds, data centre operators, and supercomputing labs.

- Created and led a System Architecture group coordinating the efforts of Product Management, R&D, QA, Support, Operations through the product lifecycle.
- Principal architect of the company's high performance, low latency InfiniBand and Ethernet switches (HW and SW), device management and fabric management software.
- Major achievements included the world's first PetaFLOP supercomputer ("Roadrunner"), multiple high-frequency trading systems with sub-microsecond latencies, and Oracle's high performance Exadata database machine, among other products.
- Worked in close contact with vendors and customers, including top tier exchanges and investment banks.

2002 – 2007: Research Staff Member — IBM Research, Haifa, Israel.

IBM Haifa Research Lab is the largest unit of the IBM Research Division outside of the US.

Led multiple projects (typical budget \$1.5M+) that have been incorporated into products such as novel system architectures for servers and massively parallel supercomputers, operating systems, distributed systems, virtualization. Examples include:

- The Blue Gene supercomputer became the fastest in the world. Its successors remain among the fastest parallel systems today, scalable to millions of cores.
- "IP Only Server" created a radically simplified, efficient server HW architecture.
- "Commercial Scale-Out" dealt with dynamic system and storage provisioning and management on a massive scale.
- "Collaborative driving systems" was an early, ahead-of-its-time look at traffic systems involving "smart" and autonomous vehicles.

2001 – 2002: Director of Development — DataZoo Ltd., Raanana, Israel.

DataZoo developed an efficient and flexible AI/ML multidimensional classification engine.

- Leading development of real time AI/ML algorithms and software.
- AI-based traffic analysis in IP networks provided the only effective protection against DDoS attacks.

2000 – 2001: Head of Algorithm Development — Comgates Ltd., Herzliya, Israel.

Comgates was a leading provider of Voice and Video over IP platforms (acquired by BATM).

- Managed multiple R&D teams (>30 researchers and SW developers).
- Led development of models, algorithms, policies, and protocols for QoS-oriented real time applications.

1996 – 2000: Financial Analyst — Bloomberg L.P. (BFM), Tel Aviv, Israel.

Bloomberg L.P. provides data services, financial analytics, trading platforms, and news.

Responsible for the vanilla and exotic option pricing functionality on the Bloomberg system, across all markets.

- Managed a team of quantitative researchers and developers.
- Developed financial and mathematical models, algorithms, and software for analysis and pricing of complex derivative securities in equity, currency, and commodity markets.
- Published financial analysis papers in the Bloomberg magazine and other publications.
- Worked closely with Bloomberg customers across the world.

EDUCATION AND ACADEMIC EXPERIENCE

2019: *Adjunct Professor, IDC, Herzliya, Israel.* Teaching Statistical Methods and Data Analysis.

2004 – 2007: *Adjunct Professor, University of Haifa, Haifa, Israel.* Teaching undergraduate and graduate level courses in Basic and Advanced Operating Systems.

1995: *Postdoctoral Researcher, Pennsylvania State University, State College, PA, and Institute for Theoretical Physics, University of California, Santa Barbara, CA.* Research in high energy astrophysics.

1994: *Visiting Researcher, Scuola Internazionale Superiore di Studi Avanzati (SISSA), Trieste, Italy.* Research in astrophysics and cosmology.

1991 – 1995: *Ph. D. in Physics, Tel Aviv University, Tel Aviv, Israel.* Research in plasma physics, radiation processes, physics of interstellar and intergalactic medium, and cosmology. Teaching courses in modern physics and physics laboratory.

1983 – 1990: *B. Sc. and M. Sc. (summa cum laude) in Radiophysics and Electronics, Gorky State University, Gorky (now Nizhny Novgorod), USSR.* [1984–1986: military service.] Research in plasma physics, radiowave propagation, physics of the ionosphere, interplanetary/interstellar medium, solar physics.

PUBLICATIONS AND PATENTS

Over 30 publications in computer science, finance, physics, and astrophysics. Several patents and patent applications. The full list is available upon request.

GENERAL SKILLS

Leadership: Building and managing geographically separated Product, R&D, Operations, and Support teams. Ability to translate business strategy and customer needs to specific and comprehensive product requirements and inbound/outbound documentation, flexible and future-proof hardware and software design, effective test plans. Serving as a knowledge focus and a direction setter for business, research, technology, support, operations.

Facing clients: Working closely with demanding clients in the world financial markets, data center facilities, networking and telecommunication industries, manufacturing, public utilities, and government departments. Requirement gathering and analysis, presale, product definitions, professional services, ROI analysis, performance analysis and reporting, sophisticated troubleshooting, etc.

Systems and storage: Novel server architecture and operating systems design. Virtualization and hypervisor technologies. Data center and cloud solution architecture and provisioning. Storage (Fibre Channel, iSCSI, NAS) solution architecture, configuration, management, software and drivers. Parallelization and supercomputers. Security infrastructure and malware detection and analysis.

Networks: Design and architecture of high performance InfiniBand and Ethernet switching and management hardware and software, protocols, policies, quality of service, topology, survivability, multipathing, management tools.

Cloud and virtualization: AWS, Azure, GCP, OpenStack, VmWare, KVM, Hyper-V, Docker, etc.

Software Development: Expert in Linux/UNIX/macOS application, kernel/eBPF, system, network programming. Fluent in C++, C, Python (including Pandas, Numpy, etc.), R, Java, PHP, Perl, Lisp, Scheme, shells, AWK, Swift, Objective-C/C++, Fortran, etc.

Algorithms: Extensive background in mathematics, data science, probability and statistics, numerical analysis, algorithmic complexity, scheduling, memory and other resource management, graphs, routing, QoS, simulations, etc.

Finance and trading technologies: Derivative pricing, financial and numerical models of options and other complex securities (commodities, currencies, equities, indices, fixed income, etc.), spot/forward currency trading, liquidity aggregation, smart order routing, etc.

Languages: Native in English, Hebrew, Russian. Fluent Italian.