YURI KOROBOCHKIN

PHD IN ENGINEERING
R&D Full Cycle Engineer, Algorithmist Developer

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SUMMARY

An experienced full cycle R&D Engineer with 30 years of proven track record in researching, developing and managing complex technical systems in various domains. A dedicated and self-motivated individual with great learning and analytical skills in programming and mathematics, strong communication skills, and a can-do attitude.

PROFESSIONAL SCIENCE FIELDS

- Linear Algebra
- Analytic Geometry
- Math Analysis
- Differential Equations
- Mathematical Programming/ Optimisation
- Linear Programming
- Discrete Programming
- Complex Analysis
- Theory of Probability
- Mathematical Statistics
- Filtration Theory
- Theoretical Mechanics
- Wave Processes
- Radar Theory
- Navigation
- Electric Drive
- Aerodynamics
- Missile Guidance System/Homing

TECHNICAL STACK

- Object-Oriented Programming
- Programming languages C, C++, Python
- Qt, C++ Builder, MSVS,
- Tools: Matlab, ArcGIS, QGIS
- DataBases: SQL
- Git, Github

WORK EXPERIENCE

R&D FULL CYCLE ENGINEER

WEIZMANN INSTITUTE OF SCIENCE
Domain: Astrophysics, Digital signals processing
Period: Jun 2023 to now
Development of GPU-accelerated applications for digital signal processing of radio telescopes based on the CUDA library
Achievements: Reduced running time of the coherent dedispersion algorithm for pulsars' signal detection by 100 times, allowing real-time processing of a raw signal

ANDREYEV ACOUSTICS INSTITUTE
Domain: Offshore Exploration in Gas and Oil Fields
Period: Jan 2022 to Aug 2022
Developing algorithms and applications for

- calibration of an acoustic underwater positioning system
- a positioning of underwater vehicles

Achievements: increased the accuracy of seismic sensors installation by 3 times

NAVY RESEARCH INSTITUTE "SALUT"
Domains: Radar Systems Desing, Geopositioning, Inertial Systems, RadioElectronic System Design, Optimal Control, Kalman Filtration, Wave Propagation, and Ballistics.
Period: Nov 2019 to Feb 2022
Developing algorithms and applications for

- complex radio-electronic system based on a vessel board
- simulation and effectiveness evaluation of a complex radio-electronic system based on a vessel board
- controlling PMSM electrical drive system, installed on a swaying platform
- co-alignment of a set of measuring gadgets based on a vessel board

Achievements: increased tracking targets accuracy by 2 times

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EDUCATION

1985 - PhD in Engineering
1980 - MS in Applied Mathematics
Lomonosov Moscow State University

LANGUAGES

Russian - native
English - B2, upper-intermidiate
Hebrew - א, beginner

WORK EXPERIENCE

BAUMAN UNIVERSITY

Domains: Radar Systems Desing, Geopositioning, Inertial Systems, RadioElectronic Systems Design, Optimal Control, Kalman Filtration, Wave Propagation.
Period: Jun 2018 to Dec 2019
Developing algorithms and applications for the effectiveness evaluation of a complex vessel radar system
Achievements: Made it possible to extract radar measurements in the simultaneous presence of sea-surface multipath and electronic attack

HELICOPTERS AVIONICA

Domains: Control System Design, Helicopter Design, Aerodynamics, Stable Theory
Period: Jun 2018 to Mar 2019
Developing algorithms and applications for

- autopilot of helicopters with coaxial propellers scheme
- helicopter training apparatus

NAVY RESEARCH INSTITUTE "AMETIST"

Domains: Radar Systems Desing, Geopositioning, Inertial Systems, RadioElectronic Systems Design, Optimal Control, Kalman Filtration, Wave Propagation
Period: Aug 2014 to Jun 2018
Developing algorithms and applications for

- controlling a complex radio-electronic system based on a vessel board
- simulation and effectiveness evaluation of a complex radio-electronic system based on a vessel board
- radar measurement extraction in the presence of a sea-surface multipath

Achievements: Made it possible to extract radar measurements in the presence of a sea-surface multipath

"HYDROPROEKT" - SCIENTIFIC RESEARCH INSTITUTE

Domains: Hydrology, Geodesy
Period: Dec 2013 to Aug 2014
Developing hydrological DEM for the basins of some of North Caucasus rivers to calculate the dams flooding areas according to the SRTM

"ZEMPROEKT" - CADASTRAL VALUATION HOLDING

Domains: Agriculture
Period: Nov 2009 to Nov 2013
Development of the algorithm and application for governmental cadastral valuation of agricultural land

1991–2009

CEO OF OWN BUSINESS

EXPREINCE IS NOT RELEVANT

1980–1991

R&D ENGINEER

MISSILE DEFENCE SYSTEMS DEVELOPMENT IN VARIOUS SOVIET UNION MILITARY SCIENTIFIC RESEARCH INSTITUTES