

# OLEKSANDR HUBANOV

## Contacts

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## Skills

IBM z/OS, Embedded Linux, ARM

C/C++ (system-level), C#, Java, Python, HLASM, Verilog, MATLAB

REST, gRPC, OpenTelemetry

Valgrind, Wireshark, IPCS, z/XDC  
Git, Jenkins

## Languages

English (C1)

Lithuanian (A2)

Ukrainian (native)

Russian (native)

## Hobbies

Classical guitar  
Night driving  
3D printing  
Bicycling

Dum spíro, spéro

System-level Principal Software Engineer with product ownership experience and expertise in performance-critical C/C++ systems across embedded platforms and hybrid cloud environments. Leads architecture, modernizes legacy systems, and mentors engineers while delivering reliable, scalable monitoring and diagnostic solutions.

## Experience

### Rocket Software

*Principal Software Engineer*  
*Senior Software Engineer*  
*Software Engineer III / II*

Vilnius, Lithuania  
Mar 2025 – Present  
Apr 2023 – Mar 2025  
Dec 2020 – Apr 2023

- Lead architecture and technical direction for core OMEGAMON framework components on IBM z/OS and hybrid environments.
- Designed, developed, and maintained system-level C/C++ and HLASM components at the core of the OMEGAMON TEMS and ITM framework.
- Acted as technical authority for complex issues involving system dumps, protocol handling, and low-level diagnostics under strict platform constraints.
- Mentored engineers and drove cross-team collaboration across backend, UI, and platform teams to deliver reliable, scalable solutions.

### Sonderus

*Software Developer*

Vilnius, Lithuania  
Jul 2019 – Dec 2020

- Developed embedded C/C++ software and Linux kernel modules for system-level tools.
- Worked across firmware, kernel, and user space, integrating hardware interfaces into Linux-based systems.
- Implemented full ONVIF support, including SOAP-based control interfaces and GStreamer-based media streaming on Linux.

### Precizika Metrology

*Engineer Programmer*

Vilnius, Lithuania  
Oct 2017 – Jul 2019

- Designed firmware and calibration systems for precision linear encoders.
- Developed signal processing tools and supporting PCBs for nanometer-level measurement accuracy.

### Vilnius Gediminas Technical University

*Junior Researcher*

Vilnius, Lithuania  
Nov 2016 – Aug 2017

- Supported biomechanics research projects using MATLAB and signal analysis.

### Various Roles (Freelance, Part-time)

*System Admin / Electrician / Developer*

Kharkiv, Ukraine  
2008 – 2016

- Early technical roles in system administration, hardware support, and embedded integration, building a strong foundation in operating systems and networking.

# Open Source Leadership & Contributions

## Open Mainframe Project — TerseDecompress

*Project Lead*

2023 – Present

- Delivered formal project releases, including versioned packaging and distribution artifacts.
- Fixed functional and edge-case bugs in the decompression logic based on real-world usage.
- Implemented a C++ port of the decompression engine to improve performance and usability outside the JVM.
- Evolved the tool to produce ZIP output from TERSE data, enabling seamless integration with distributed tooling that expects standard compressed formats.
- Introduced CI automation using GitHub Actions to validate builds and prevent regressions.

## ICU (International Components for Unicode)

*Primary Contributor (IBM z/OS Platform Support)*

2024 – Present

- Restored and maintained IBM z/OS build support by migrating from IBM XL C to IBM OpenXL and resolving build configuration and UTF-8/BOM issues.
- Contributed fixes that prevented potential deprecation of library support for IBM z/OS platform.

## Education

### Vilnius Gediminas Technical University

Vilnius, Lithuania

*PhD Studies in Biomechanics (paid scholarship, not completed)*

2017 – 2022

- Conducted research in soft tissue biomechanics and EMG signal analysis.
- Mentored junior PhD students and contributed to academic publications.

### Kharkiv National University of Radioelectronics

Kharkiv, Ukraine

*Master's in Biomedical Engineering*

2014 – 2016

*Bachelor's in Biomedical Engineering (paid scholarship)*

2011 – 2014

- Focused on medical signal processing and biomedical systems.

### Kharkiv College of Medical Equipment

Kharkiv, Ukraine

*Specialist Diploma in Medical Electronics Design (Honors)*

2008 – 2011

- Focused on medical electronics, diagnostics, and servicing of electronic medical devices.

## Publications

- Gubanov A., Zhemchuzhkina T., Nosova T., Nosova Y.  
*On the Methods of Registration of Biosignals for Human Interface Device.*  
19th International Youth Forum "Radio Electronics and Youth in the XXI Century".
- Gubanov A., Zhemchuzhkina T., Nosova T., Nosova Y.  
*Some Technological Solutions of Realization of Human Interface Device.*  
Bulletin of NTU "KhPI", 2015, 62(1171), pp. 52–57. ISSN 2079-5459.
- Gubanov A., Zhemchuzhkina T., Nosova T., Nosova Y.  
*Data Processing Electromyographic Module.*  
Shevchenkivska Vesna 2015: Radiophysics. Electronics. Computer Systems.

- T.V. Zhemchuzhkina, T.V. Nosova, Y.V. Nosova, A.V. Gubanov et al.  
*Statistical Analysis of the Spectral Characteristics of the EMG Signal for the Purpose of Differentiation of Lumbar Pain.*  
Bionics of Intelligence, No. 2(85), 2015, pp. 105–108.