



Alexander Kondratyev
Embedded Software Engineer

📍 Iserlohn, Germany
☎ +49 (172) 393 17 67
✉ alexander.kondratyev.dev@gmail.com
🌐 <https://alexkondratyev.github.io/linktree/>
🌐 https://t.me/kondratyev_an
🌐 <https://www.linkedin.com/in/alexandr-kondratyev-dev/>
🌐 <https://github.com/AlexKondratyev>



Personal Details

Date of birth: 3 September 1994 (30 years old) in Omsk, Russia. Marital status: married, 1 kid. Nationality: Russian. From 2021 to 2023 Head of sector in Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP). From 2019 to 2023 Junior researcher Institute of Radiophysics and Physical Electronics – subdivision of Omsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences (IRPhE OSC RAS).



Education

Post-graduate student Dostoevsky Omsk State University (OmSU) Diploma thesis: Modeling of microwave communication channels based on the forecast of the state of the ionosphere.	Sept. 2018 – June 2022
Master of Science in Physics Dostoevsky Omsk State University (OmSU) Diploma thesis: Prediction of F2 critical frequency using statistical analysis.	Sept. 2016 – June 2018
Bachelor of Science in Physics Dostoevsky Omsk State University (OmSU) Diploma thesis: Research intensity distribution in the laser beam cross section.	Sept. 2012 – June 2016



Experiences

I have the skills to write application and embedded software. Knowledge of programming languages: C/C++ Python. Git. Knowledge of the architecture of STM32 series microcontrollers. Core: (Registers, Bus, Flash / SRAM / DRAM memories). Periphery: (GPIO, PWM, Watchdog, ADC, DMA, EEPROM, RTC). Features: (Interrupters, Timers, Counters). I used UART, SPI, I2C and 1Wire protocols in projects. Studied circuit and printed circuit board (PCB) design. Developed several electrical circuits in EasyEDA and KiCad EDA. I have ability to read documentation of various components such as (ADC, DAC, EEPROM, Operational amplifiers, etc.). Used USB protocol like CDC, DFU and HID classes in projects. Used open source file systems: FatFS, littleFS and NASA FS, in projects with a complex data storage structure. I have mentored for junior developers on one of the projects.

Head of sector Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)	Oct. 2021 - May 2023
Junior researcher Institute of Radiophysics and Physical Electronics – subdivision of Omsk Scientific Center of the Siberian Branch of the Russian Academy of Sciences (IRPhE OSC RAS)	Oct. 2019 - May 2023
Middle Software Engineer Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)	Jan. 2020 - Oct. 2021
Junior Software Engineer Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)	Jan. 2018 - Jan. 2020
Engineer Omsk Scientific-Research Institute of Instrument Engineering (JSC ONIIP)	Oct. 2016 - Jan. 2018



Conferences, Articles & Certificates

Article in scientific journal Advances in Space Research Improving forecasting accuracy the F2-layer peak characteristics using artificial neural network (Author)	2023
Article in scientific journal Radio communications Algorithm for increasing the accuracy of recovering total electron content by code and phase delays of signals of global navigation satellite system (Author)	2022
Article in scientific journal Radio communications Implementation of adaptive product customization processes in mass production (Author)	2021
IV international scientific and technical conference The method of adjusting the empirical coefficients of the ionosphere model to improve the accuracy of predicting the critical frequency of the F2 layer (Author)	2021
IV international scientific and technical conference Evaluation of the efficiency of using GNSS for forecasting the total electron content (Speaker, Author)	2021
Article in scientific Journal of Atmospheric and Solar-Terrestrial Physics Improving the ionospheric model accuracy using artificial neural network (Author)	2020
Article in scientific journal Radio communications Adaptation of the ionospheric model for calculation of the critical frequency of F2 layer (Author)	2018
IV international scientific and technical conference Forecasting critical frequency of layer F2 on the based of methods of statistical analysis (Speaker, Author)	2017
Regional student scientific and practical conference "Youth of the Third Millennium" Distribution of intensity in the cross section of the laser beam (Speaker, Author)	2016



Awards

Winner in the nomination "Best Software Solution of the Year" for the development of an automated control system.	2023
Winner of the All-Russian competition "Engineer of the Year" link	2022
Best young Professional of the Year in Software Development link	2021
Best young Professional of the Year in Software Development link	2018



Languages

Russian (Mother language)

English (B1)

Deutsch (A2)



Skills Proficiency

Linux C C++ Python STM32 AVR Google Test Framework SQL PostgreSQL Django Eclipse VS Code

Qt KiCad EDA Docker GitLab CI/CD Agile Circuit design System design