

Ivan Koralt

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Overview of Qualifications and Interests

- 4+ years experience in semiconductor high volume manufacturing and process development; Lean manufacturing; defect mode analysis and reduction; yield improvement; tool ownership; equipment sustaining, characterization, testing and optimization; statistical process control methodologies; engineering analysis tools; Failure Mode and Effects Analysis (FMEA); capital equipment design, install and qualification; capital project coordination and management etc. All previous and current projects are subject to Intellectual Property of Intel Corporation.
- 10+ years experience in diverse research and development; experimental particle and nuclear physics; physics of semi-conductors; Monte-Carlo modeling and simulation; plasma physics; plasma diagnostics and lasers etc.

Experience

- **Software Development Engineer**, Feb. 2018 – present
Intel Corporation, San Diego, CA.
Communications and Devices Group (iCDG), Modem and Platform SW Division.
 - **DevOps Engineer**, Feb. 2018 – present
I am a part of iCDG Modem Automation Tool framework team which is responsible for development and deployment of automation framework, tools/applications/scripts for running all integration, verification and validation in a fully automated environment. Working closely with automation tools/scripts development team and verification/integrations teams to deploy the SW tools/applications on lab client machines. A local debugging expert in most aspects of test automation including automation framework, test environment. Providing L3SME level expertise for automation issues reported by test engineers.
- **Technology Development Module and Integration Yield Engineer**, Feb. 2014 – Feb. 2018
Intel Corporation, Hillsboro, OR.
Technology Manufacturing Group (TMG), D1 Fab, Dry Etch Dept.
 - **Lead Equipment Engineer**, Oct. 2015 – Feb. 2018.
I lead a team of engineers and engineering technicians, and owned all capital equipment projects (including development), from planning to completion, worth several hundred millions of dollars, across multiple modules in Dry Etch Department at Intel's Technology Manufacturing Group. I successfully completed the first phase of equipping Intel's D1X M1/M2 Fab with significant cost savings and project completion time reductions. I was a go to person for any equipment and facilities related issues and a first responder for any type of equipment related safety, quality and output issues. My ownership spanned across capital equipment and labor cost negotiations, parts management, procurement, equipment and facilities design and improvements, contractor coordination etc. Field of influence and impact spanned across multiple stakeholders in Intel's domestic and international Factories. I was ranked among top 10% of Intel's employees on annual performance reviews for several years in a row.
 - **Senior Technology Development Process/Manufacturing Engineer**, Feb. 2014 – Oct. 2015.
I was a tool and layer owner at Intel's Dry Etch module in Ramp organization. I designed, tested and implemented new technological solutions to improve yield while running full capacity production. I owned and successfully completed multiple defect reduction and yield improvement projects and pilots. I improved process recipes, wrote in depth equipment maintenance "Best Known Methods" with direct improvement on equipment's "green-to-green" times. I trained a group of Manufacturing and Engineering Technicians, and new Engineers on best practices in equipment preventive maintenance procedures. I was responsible for safety, quality, cost and manufacturability of the production module. Defined road-maps to meet requirements, goals and milestones for a new technology process.
- **Graduate Research Assistant**, 2009 - 2013.
Brookhaven National Laboratory, Upton NY.

Commissioned, tested and troubleshoot semi-conductor particle detectors. Estimated detector inefficiencies and proposed solutions, new designs and improvements. Data mining and analysis of large scientific data sets from U.S. Department of Energy (DOE) funded experiments. Developed Monte Carlo simulations and models of experiments and both data production and reconstruction techniques; Verified and optimized data extraction techniques.

- **Graduate Research Assistant**, 2007 - 2013.
Old Dominion University, Norfolk VA.

Conducted cutting edge scientific research in the field of experimental nuclear and particle physics in collaboration with Physics Department of Brookhaven National Laboratory. Utilized the computer and related data-processing equipment in the treatment of research data. Wrote in-depth research reports based upon data analysis results. Presented research data at conferences, scientific symposiums and professional society meetings. Built and tested Drift Chamber prototype for the upgrade of the second Region II CLAS at Jefferson National Accelerator in Newport News, VA.

- **Graduate Teaching Assistant**, 2007 - 2013.
Old Dominion University, Norfolk VA.

Instructor for calculus-based and algebra-based introductory level physics courses. Taught SCALE-UP (Student Centered Active Learning Environment for Undergraduate Programs) method based Physics Undergraduate courses. Conducted three sections per week of lectures and physics laboratory (per semester), both calculus-based and algebra-based. Was responsible for 2 hours per week of physics tutoring in the Physics Learning Center, which included tutoring for students from all levels of physics study. Was responsible for monitoring class performance and grading student progress.

- **Research Associate**, 2005 - 2007.
Institute of Physics Belgrade, Belgrade, Serbia (Republic Of)

Conducted research in atomic and molecular physics, plasma physics, plasma diagnostics and lasers. Developed spectroscopic methods for diagnosis of plasmas in extreme conditions: very low and very high density plasmas. Developed computer codes for quick search of spectroscopic data tables and charts.

Education

- **Doctor of Philosophy** in Physics, Old Dominion University, Norfolk, VA, 2013.
- **Master of Science** in Physics, Old Dominion University, Norfolk, VA, 2009.
- **Diplom Physicist (M.Sc. equivalent)**, University of Belgrade, Serbia (Republic of), 2005.

Computer Skills

- **Computer Languages:** Object oriented programming C/C++.
- **Business Software:** JMP, OriginLab, MATLAB, Microsoft Office Package, Latex etc.
- **Operating Systems:** Mac OS X, Linux, Unix, Microsoft Windows.

Skills

- Ability to enter new fields/research areas, and consistently investigate new projects and implement solutions.
- Strong networking and collaboration skills; excel at working with others to achieve results.
- Co-author of several papers in peer reviewed journals; numerous presentations for seminars and international conferences.

Language proficiency

- **English** - full professional proficiency.
- **Serbo - Croatian** - native.

Scientific Publications

Over 70 publications (since 2008) with more than 6000+ [citations](#) . Full publication list on [INSPIRE](#) .

Other Skills and Competences

Analytic thinking, quick thinking, problem solving, reasoning, creativity and innovation. Quick learning, flexibility, adaptability, multitasking, managing multiple priorities. Dedicated, self-motivated, hard working, responsible, reliable and dependable. Loyal, committed to professionalism, respectful, self-confident and honest. Positive, openminded, passionate for work, very good team player. Enthusiastic, knowledge-hungry learner, eager to meet challenges and quickly assimilate new concepts. Opened for new ideas. Productive worker with solid work ethic. Committed to excellence and success.