

Viktor D. Khristenko

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- *Languages* Russian(native) • English(native fluency) • French(B1-B2)

Professional Activities

Deputy Coordinator - CMS Hadron Calorimeter Operations Group 2015-2016

CERN - European Organization for Nuclear Research, Geneva, Switzerland

- “CMS 2015 Achievement Award”
- Responsible for Operational Aspects of all the Components of the *Calorimeter* System
- Coordination \Rightarrow Installation \Rightarrow Debugging \Rightarrow DataTaking \Rightarrow Status Report \Rightarrow Collaboration \Rightarrow Training Newcomers

Group Lead - CMS Hadron Calorimeter Data Quality Monitoring Group 2014-Current

CMS - Compact Muon Solenoid Experiment @CERN, Geneva, Switzerland

- Responsible for Data Certification Process - Validating the Usability of Collected Data by Physics Analyses
- Designed and Implemented Criteria & Instructions targeting Calorimeter Performance Evaluation
- Complete *Software Lifecycle* Support for Critical *Data-driven Quality Control Applications*

Graduate Research Assistant 2014-Current

CMS Experiment @CERN, Geneva, Switzerland • The University of Iowa, Iowa City, IA, USA

- *Big Data* Analyses, e.g. *Higgs Boson* Searches
- Design, construction and analysis of *Monte Carlo* Simulations of Particle Detectors using *Geant4*
- Data Analysis and Operations Support for *Fermilab* T-1041 “CMS Forward Calorimetry R&D” Experiment
- Calibration of the CMS Hadron Forward Calorimeter using Radioactive Sources

Graduate Teaching Assistant 2012-Current

The University of Iowa, Iowa City, IA, USA

- Teaching Laboratory and Discussion Sections for General Physics Courses
- Grading Home Assignments for graduate & undergraduate level Courses.

Research Assistant 2009-2012

Coe College, Cedar Rapids, IA, USA

- *Raman Spectroscopy* Measurements of Titanium Oxide-based glasses
- *Scientific Application Development* for *Nuclear Magnetic Resonance Spectroscopy*

Programming Skills

Experienced

C/C++/STL/Boost • python • Scala • SQL • Graphlab • ROOT • git • LaTeX • scikit-learn

Familiar

Apache Spark/MapReduce • Java • JScript • php • Elixir/Erlang

Education

PhD in Physics	2012-2017(Expected)
<i>The University of Iowa, Iowa City, IA, USA</i>	
<ul style="list-style-type: none">• Thesis Title, “Search for Standard Model Higgs Boson decaying via Dimuon Channel at $\sqrt{s} = 13$ TeV in CMS, Calibration of Hadron Forward Calorimeter in Preparation for Run 2”	
BA Physics and Mathematics; Cum Laude	2009-2012
<i>Coe College, Cedar Rapids, IA, USA</i>	
<ul style="list-style-type: none">• <i>Minor in Computer Science</i>• Dean’s List Spring 2010 & Fall 2010	
Department of Cybernetics	2008-2009
<i>Moscow Engineering Physics Institute, Moscow, Russia</i>	
Online Education Certificates	
<i>Coursera</i>	
<ul style="list-style-type: none">• Functional Programming Principles in <i>Scala</i> (EPFL).	Certificate
<ul style="list-style-type: none">• Functional Program Design in <i>Scala</i> (EPFL).	Certificate
<ul style="list-style-type: none">• Machine Learning Foundations: A Case Study Approach (University of Washington)	Certificate
<ul style="list-style-type: none">• Machine Learning: Regression (University of Washington)	Certificate
<ul style="list-style-type: none">• Machine Learning: Classification (University of Washington)	Certificate

Athletic Activities

Volunteer Assistant Tennis Coach	2013-2014
<i>The University of Iowa Hawkeyes Men’s Tennis Team, NCAA Division 1</i>	
Student Athlete, Coe College Varsity Men’s Tennis Team	2009-2012
<ul style="list-style-type: none">• <i>IIAC Team Champion (2012)</i>• <i>NCAA Regionally Ranked in Singles (2011, 2012)</i>• <i>IIAC All-Conference (2009, 2011, 2012)</i>• <i>IIAC Conference Champion (2009, 2010, 2011, 2012)</i>• <i>Team Captain (2011, 2012)</i>	

Publications & Presentations

- “10B NMR Powder Pattern Optimized for Distribution of the Quadrupole Parameters”
“*Borate 2011: 7th International Conference on Borate Glasses, Crystals and Melts*” Halifax, NS Canada
- V. Khristenko et al., “SpectraFit: A New Program to Simulate and Fit Distributed 10B Powder Patterns: Application to Symmetric Trigonal Borons.”, Phys. Chem. Glasses: Eur. J. Glass Sci Technol. B, June 2012, 53 (3), 121-127.
- U. Akgun, ..., V. Khristenko et al., “Characterization of 1800 Hamamatsu R7600-M4PMTs for CMS HF Calorimeter upgrade”, Journal of Instrumentation, 2014 JINST 9 T06005
- U. Akgun, ..., V. Khristenko et al., “Quartz Plate Calorimeter Prototype with Wavelength Shifting Fibers”, Journal of Instrumentation, JINST 002P 0412, 2012
- A. Albayrak-Yetkin, ..., V. Khristenko “Secondary Emission Calorimetry: Fast and Radiation-Hard”, Snow-mass White Paper, arXiv: 1307.8051.