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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 ⇒ Installation ⇒ Debugging ⇒ DataTaking ⇒ Status Report ⇒ Collaboration ⇒ 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)

The University of Iowa, Iowa City, IA, USA

- 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

Coe College, Cedar Rapids, IA, USA

- ***Minor in Computer Science***
- Dean's List Spring 2010 & Fall 2010

Department of Cybernatics 2008-2009

Moscow Engineering Physics Institute, Moscow, Russia

Online Education Certificates 2016-2016

Coursera

- ***Functional Programming*** Principles in ***Scala*** (EPFL). Certificate
- ***Functional Program*** Design in ***Scala*** (EPFL). Certificate
- ***Machine Learning*** Foundations: A Case Study Approach (University of Washington) Certificate
- ***Machine Learning***: Regression (University of Washington) Certificate
- ***Machine Learning***: Classification (University of Washington) Certificate

Athletic Activities

Student Athlete, Coe College Varsity Men's Tennis Team 2009-2012

- *IIAC Team Champion (2012)*
- *NCAA Regionally Ranked in Singles (2011, 2012)*
- *IIAC All-Conference (2009, 2011, 2012)*
- *IIAC Conference Champion (2009, 2010, 2011, 2012)*
- *Team Captain (2011, 2012)*

Volunteer Assistant Tennis Coach 2013-2014

The University of Iowa Hawkeyes Men's Tennis Team, NCAA Division 1

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", Snowmass White Paper, arXiv: 1307.8051.