Viktor D. Khristenko

- *Address*   510/1-004 CERN, CH-1211, Geneva 23, Switzerland
- *Phones*   +41 (0)76 617 67 50 • +41 (0)75 411 28 74 • +7 (8)910 748 15 14
- *Email*   vdkhristenko1991@gmail.com
- *Linkedin*   https://www.linkedin.com/in/viktor-khristenko
- ***Languages*** Russian(native) • English(native fluency) • French(B1-B2)

Professional Activities

Group Lead - CMS Hadron Calorimeter Data Quality Monitoring Group   2014-Current
CERN *- European Organization for Nuclear Research, 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***

Deputy Coordinator - CMS Hadron Calorimeter Operations Group   2015-2016
CMS *- Compact Muon Solenoid Experiment @CERN, 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

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 CMS 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 Cybernetics   2008-2009
Moscow Engineering Physics Institute, Moscow, Russia

Online Education Certificates
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

Volunteer Assistant Tennis Coach   2013-2014
The University of Iowa Hawkeyes Men's Tennis Team, NCAA Division 1

Student Athlete   2009-2012
Coe College, Varsity Men's Tennis Team, NCAA Division 3
- 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)

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.