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## Personal Info

Full Name Sergey Senkin  
Date of Birth January 5, 1988

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## Contact Details

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## Education

2010 – present **PhD in Particle Physics**, *University of Bristol (expected in March 2014).*  
2008 – 2010 **MSc in Applied Physics and Maths**, *Moscow Institute of Physics and Technology.*  
2004 – 2008 **BSc in Applied Physics and Maths**, *Moscow Institute of Physics and Technology.*

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## Experience

### Research

Autumn 2010 – present **PhD Student**, *University of Bristol, Particle Physics Group, Bristol, UK.*  
Top quark mass and  $t\bar{t}+X$  cross section measurement at CMS in lepton+jets channel  
Autumn 2009 – Summer 2010 **Research Assistant**, *Joint Institute for Nuclear Research, CMS group, Dubna, Russia.*  
CMS muon High-Level Trigger efficiency studies  
Autumn 2008 – Spring 2009 **Research Assistant**, *Texas A&M University, Department of Physics and Astronomy.*  
Search for the lightest NMSSM Higgs boson ( $h_1 \rightarrow a_1 a_1 \rightarrow 4\mu$ )  
Summer 2007 **Intern Student**, *Fermi National Accelerator Laboratory, Batavia, IL, USA.*  
Tevatron turn-by-turn data fitting using MAD-X

### Service work

Summer 2011 – Autumn 2012 **Trigger Developer/Shifter**, *CERN, LHC, CMS detector, Point 5, Cessy, France.*  
Top Trigger developer; ECAL Endcaps High-Voltage System on-call expert  
November 2008 **CSC Shifter**, *CERN, LHC, CMS detector, Point 5, Cessy, France.*  
Cathode Strip Chambers subsystem maintenance

### Teaching

Spring 2011, Spring 2013 **Tutor**, *University of Bristol, School of Physics.*  
Tutorials in Maths and Particle Physics for L1 and L3 students  
Spring 2009 **Teaching Assistant**, *Texas A&M University, Department of Physics and Astronomy.*  
Tutorials and labs for freshman General Physics course  
March 2005 **Physics Grader**, *National Physics Olympiad for high school students.*

### Relevant training

August 2012 CTEQ-Fermilab Summer School on QCD and Electroweak Phenomenology,  
Pontificia Universidad Católica del Perú, Lima, Peru

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## Languages

English **Fluent**  
Russian **Native**

TOEFL iBT score: 111 out of 120 (November 2009)

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## Computer Skills

OS	Linux/Unix, Mac OS X	programming	C/C++, python
scientific	CMSSW, Geant4, Mathematica	revision control	Git, SVN, CVS
IDE	Eclipse	typography	L <sup>A</sup> T <sub>E</sub> X, OpenOffice
		other skills	GRID, ROOT, rootpy, matplotlib

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## Conference and Workshop Presentations

- 18 Jun 2013 *Measurement of Global Distributions in Top Pair Events with CMS at the LHC*, Postgraduate Conference, Bristol, UK
- 9 Apr 2013 *Measurement of MET, HT and other global distributions in top pair events*, IoP Conference, Liverpool, UK
- 8 Jan 2013 *Measurement of MET, HT and other global distributions in top pair events*, CMS UK Collaboration meeting, Abingdon, UK
- 14 Jun 2012 *Validation study of Particle Flow Jet Energy Corrections for top paths*, Trigger Studies Group meeting, CERN
- 15 May 2012 *Jets at High Level Trigger for top physics*, Top Quark PAG meeting, CERN
- 12 Dec 2011 *Using HitFit kinematic fitter in lepton+jets top mass analyses*, Workshop on kinematic fitting, CERN

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## Honours and Awards

- 2010 University of Bristol Postgraduate Research Scholarship
- 2008 TAMU Department of Physics Fellowship
- 2004 Yuri Gagarin award in "Study and scientific research" nomination
- Russian National Physics and Mathematics Olympiads (region round):*
  - 2004 1st diploma in physics and mathematics
  - 2003 2nd diploma in physics, 3rd in mathematics

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## Scientific Interests

- o Particle physics, detector physics, search for new phenomena
- o Computer science, IT

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## Other Interests

- o Alpine skiing, mountain biking, surfing, travelling
- o Playing musical instruments (guitar/piano)

## Publications

- 2013 *Measurement of missing transverse energy and other event-level observables in top pair events at  $\sqrt{s} = 8$  TeV*, CMS Collaboration  
CMS-PAS-TOP-12-042, paper in preparation
- December 2012 *Measurement of the top-quark mass in  $t\bar{t}$  events with lepton+jets final states in pp collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1209.2319, DOI:10.1007/JHEP12(2012)105, JHEP
- April 2010 *LHC discovery potential of the lightest NMSSM Higgs in  $h_1 \rightarrow a_1 a_1 \rightarrow 4\mu$  channel*, with Alexander Belyaev, Jim Pivarski, Alexei Safonov and Aysen Tatarinov  
arXiv:1002.1956, DOI:10.1103/PhysRevD.81.075021, Phys. Rev. D

## Additional Publications

- March 2013 *Search for the standard model Higgs boson produced in association with a top-quark pair in pp collisions at the LHC*, CMS Collaboration  
arXiv:1303.0763, submitted to JHEP
- March 2013 *Measurement of the  $t\bar{t}$  production cross section in pp collisions at  $\sqrt{s} = 7$  TeV with lepton+jets final states*, CMS Collaboration  
arXiv:1212.6682, DOI:10.1016/j.physletb.2013.02.021, Physics Letters B
- March 2013 *Measurement of differential top-quark pair production cross sections in pp collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1211.2220, DOI:10.1140/epjc/s10052-013-2339-4, European Physical Journal C
- January 2013 *Search for heavy quarks decaying into a top quark and a W or Z boson using lepton + jets events in pp collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1210.7471, DOI:10.1007/JHEP01(2013)154, JHEP
- December 2012 *Measurement of the top-quark mass in  $t\bar{t}$  events with lepton+jets final states in pp collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1209.2319, DOI:10.1007/JHEP12(2012)105, JHEP
- December 2012 *Search for pair produced fourth-generation up-type quarks in pp collisions at  $\sqrt{s} = 7$  TeV with a lepton in the final state*, CMS Collaboration  
arXiv:1209.0471, DOI:10.1016/j.physletb.2012.10.038, Physics Letters B
- October 2012 *Inclusive and differential measurements of the  $t\bar{t}$  charge asymmetry in proton-proton collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1207.0065, DOI:10.1016/j.physletb.2012.09.028, Physics Letters B
- October 2012 *Search for charge-asymmetric production of  $W'$  bosons in top pair + jet events from pp collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1206.3921, DOI:10.1016/j.physletb.2012.09.048, Physics Letters B
- March 2012 *Measurement of the charge asymmetry in top-quark pair production in proton-proton collisions at  $\sqrt{s} = 7$  TeV*, CMS Collaboration  
arXiv:1112.5100, DOI:10.1016/j.physletb.2012.01.078, Physics Letters B
- June 2012 *Measurement of the mass difference between top and antitop quarks*, CMS Collaboration  
arXiv:1204.2807, DOI:10.1007/JHEP06(2012)109, JHEP

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## Referees

### **Professor Greg Heath**

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