

# Sergey Senkin

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## Personal Info

Full Name Sergey Senkin  
Date of Birth January 5, 1988

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## Contact Details

Address HH Wills Physics Laboratory, University of Bristol, Tyndall Ave, Bristol BS8 1TL, UK  
Mobile Phone +44 (0) 7796 223597 (UK), +41 79 289 8398 (swiss)  
Email [sergey.senkin@bristol.ac.uk](mailto:sergey.senkin@bristol.ac.uk)  
Homepage <http://cern.ch/senkin/>

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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– **Research Assistant**, *Joint Institute for Nuclear Research, CMS group, Dubna, Russia*  
Summer 2010 CMS muon High-Level Trigger efficiency studies  
Autumn 2008– **Research Assistant**, *Texas A&M University, Department of Physics and Astronomy*  
Spring 2009 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 optics fit using MAD-X

### Service work

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

### Teaching

Spring 2011, **Tutor**, *University of Bristol, School of Physics*  
Spring 2013 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**

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

Russian **Native**

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## Computer Skills

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

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

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## Other Interests

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

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## Publications with significant contribution

- 2013 CMS Collaboration, “Measurement of missing transverse energy and other event-level observables in top pair events at  $\sqrt{s} = 8$  TeV”, *CMS-PAS-TOP-12-042*, *paper in preparation*
- 2013 CMS Collaboration, “Measurement of missing transverse energy in top pair events at  $\sqrt{s} = 7$  TeV”, *CMS-PAS-TOP-12-019*, *paper in preparation*
- 2012 CMS Collaboration, “Measurement of the top-quark mass in  $t\bar{t}$  events with lepton+jets final states in pp collisions at  $\sqrt{s} = 7$  TeV”, *DOI:10.1007/JHEP12(2012)105*, *JHEP*
- 2010 Alexander Belyaev, Jim Pivarski, Alexei Safonov, Sergey Senkin, and Aysen Tatarinov, “LHC discovery potential of the lightest NMSSM Higgs in  $h_1 \rightarrow a_1 a_1 \rightarrow 4\mu$  channel”, *DOI:10.1103/PhysRevD.81.075021*, *Phys. Rev. D*

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## Publications with contribution via the High-Level Trigger work

- 2013 CMS Collaboration, “Search for the standard model Higgs boson produced in association with a top-quark pair in pp collisions at the LHC”, *DOI:10.1007/JHEP05(2013)145*, *JHEP*
- 2013 CMS Collaboration, “Measurement of the  $t\bar{t}$  production cross section in pp collisions at  $\sqrt{s} = 7$  TeV with lepton+jets final states”, *DOI:10.1016/j.physletb.2013.02.021*, *Physics Letters B*
- 2013 CMS Collaboration, “Measurement of differential top-quark pair production cross sections in pp collisions at  $\sqrt{s} = 7$  TeV”, *DOI:10.1140/epjc/s10052-013-2339-4*, *European Physical Journal C*
- 2013 CMS Collaboration, “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”, *DOI:10.1007/JHEP01(2013)154*, *JHEP*
- 2012 CMS Collaboration, “Measurement of the top-quark mass in  $t\bar{t}$  events with lepton+jets final states in pp collisions at  $\sqrt{s} = 7$  TeV”, *DOI:10.1007/JHEP12(2012)105*, *JHEP*
- 2012 CMS Collaboration, “Search for pair produced fourth-generation up-type quarks in pp collisions at  $\sqrt{s} = 7$  TeV with a lepton in the final state”, *DOI:10.1016/j.physletb.2012.10.038*, *Physics Letters B*
- 2012 CMS Collaboration, “Inclusive and differential measurements of the  $t\bar{t}$  charge asymmetry in proton-proton collisions at  $\sqrt{s} = 7$  TeV”, *DOI:10.1016/j.physletb.2012.09.028*, *Physics Letters B*
- 2012 CMS Collaboration, “Search for charge-asymmetric production of W’ bosons in top pair + jet events from pp collisions at  $\sqrt{s} = 7$  TeV”, *DOI:10.1016/j.physletb.2012.09.048*, *Physics Letters B*
- 2012 CMS Collaboration, “Measurement of the charge asymmetry in top-quark pair production in proton-proton collisions at  $\sqrt{s} = 7$  TeV”, *DOI:10.1016/j.physletb.2012.01.078*, *Physics Letters B*
- 2012 CMS Collaboration, “Measurement of the mass difference between top and antitop quarks”, *DOI:10.1007/JHEP06(2012)109*, *JHEP*

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## Last Updated

February 7, 2014

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