

# Sergey Senkin

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## Personal info

Full Name	Dr Sergey Senkin	Citizenship	Russian Federation
Date of Birth	January 5, 1988	Place of Birth	Arkalyk, Kazakhstan

## Contact details

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## Education

2010–2014 **PhD in Particle Physics**, *University of Bristol*.  
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*.

## Experience

### Research

Dec 2015– **Postdoctoral Researcher**, *LPC Clermont Ferrand, France*.  
present  $t\bar{t}+X$  Dark Matter search with the ATLAS detector at the Large Hadron Collider, CERN  
May 2014– **Postdoctoral Researcher**, *University of Bristol, UK*.  
Nov 2014  $t\bar{t}+X$  cross section measurement at the CMS detector at the Large Hadron Collider, CERN  
Oct 2010– **PhD Student**, *University of Bristol, UK; CERN*.  
May 2014 Top quark mass and  $t\bar{t}+X$  cross section measurement at CMS in the lepton+jets channel  
Sep 2009– **Research Assistant**, *Joint Institute for Nuclear Research, Dubna, Russia*.  
Jun 2010 CMS dimuon High-Level Trigger efficiency studies  
Sep 2008– **Research Assistant**, *Texas A&M University, College Station, TX, USA*.  
Mar 2009 Search for the lightest NMSSM Higgs boson ( $h_1 \rightarrow a_1 a_1 \rightarrow 4\mu$ )  
Jun 2007– **Intern Student**, *Fermi National Accelerator Laboratory, Batavia, IL, USA*.  
Sep 2007 Tevatron turn-by-turn optics fit using MAD-X

### Service work

Autumn 2016– **Data Quality Leader**, *CERN, Geneva, Switzerland*.  
present Tile Hadronic Calorimeter performance and maintenance  
Summer 2011– **HLT Developer/Shifter**, *CERN, Geneva, Switzerland*.  
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 detector subsystem maintenance

### Teaching

Spring 2011, **Tutor**, *University of Bristol, School of Physics, Bristol, UK*.  
Spring 2013 Tutorials in Maths and Particle Physics for L1 and L3 students  
Spring 2009 **Teaching Assistant**, *Texas A&M University, College Station, TX, USA*.  
Tutorials and labs for freshman General Physics course

## Relevant training

- August 2012 **CTEQ-Fermilab Summer School on QCD and Electroweak Phenomenology**, Pontificia Universidad Católica del Perú, Lima, Peru.
- Autumn 2011 **RAL HEP Summer School**, Rutherford Appleton Laboratory, Abingdon, UK.

## Other experience

- Dec 2014– **Gap year for world travel.**
- July 2015 *Explored the cultures and nature of China, Tibet, Nepal, India, Burma, Thailand, Indonesia, Vietnam, Australia, New Zealand, Canada and Cuba.*

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## Languages

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

*French* **Basic**

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## Computer skills

<i>OS</i>	Linux/Unix, Mac OS X	<i>programming</i>	C/C++, python, R
<i>scientific</i>	CMSSW, Geant4, Mathematica	<i>revision control</i>	Git, SVN, CVS
<i>big data</i>	GRID, Hadoop	<i>typography</i>	L <sup>A</sup> T <sub>E</sub> X, OpenOffice
<i>IDE</i>	Eclipse	<i>other skills</i>	ROOT, SciPy/NumPy, 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” category  
*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 and other interests

- Particle physics, search for new phenomena, data science, IT
- Machine learning, AI, sustainable development, health physics, neuroscience
- Alpine skiing, mountain biking, scuba diving, surfing, travelling

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## Publications

- Google Scholar profile: <https://goo.gl/JwwVa2>
- INSPIRE HEP profile: <http://inspirehep.net/author/profile/S.Senkin.1>

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## Publications with significant contribution

- 2016 ATLAS Collaboration, “Search for new phenomena using events with b-jets and a pair of same-charge leptons in  $3.2 \text{ fb}^{-1}$  of pp collisions at  $\sqrt{s} = 13 \text{ TeV}$  with the ATLAS detector”, *ATLAS-CONF-2016-032*, *ATLAS conference note*
- 2016 CMS Collaboration, “Measurement of the differential cross sections for top quark pair production as a function of kinematic event variables in pp collisions at  $\sqrt{s} = 7$  and  $8 \text{ TeV}$ ”, *DOI:10.1103/PhysRevD.94.052006*, *Phys. Rev. D*
- 2012 CMS Collaboration, “Measurement of the top-quark mass in  $t\bar{t}$  events with lepton+jets final states in pp collisions at  $\sqrt{s} = 7 \text{ TeV}$ ”, *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 boson 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  $\sqrt{s} = 7 \text{ TeV}$  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  $\sqrt{s} = 7 \text{ TeV}$ ”, *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  $\sqrt{s} = 7 \text{ TeV}$ ”, *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  $\sqrt{s} = 7 \text{ TeV}$ ”, *DOI:10.1007/JHEP12(2012)105*, *JHEP*
- 2012 CMS Collaboration, “Search for pair produced fourth-generation up-type quarks in pp collisions at  $\sqrt{s} = 7 \text{ TeV}$  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  $\sqrt{s} = 7 \text{ TeV}$ ”, *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  $\sqrt{s} = 7 \text{ TeV}$ ”, *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  $\sqrt{s} = 7 \text{ TeV}$ ”, *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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## Referees

### **Dr Romain Madar**

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### **Dr Stéphanie Beauceron**

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### **Professor Joel Goldstein**

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## Last Updated

January 20, 2017

<https://github.com/senkin/CV>