

CURRICULUM VITAE

Tzvetan Simeonov

Sofia 1618, Bulgaria

+359 884 516 489

simeonov@phys.uni-sofia.bg

Bulgarian

I have obtained my Master degree in Meteorology from Sofia University. Since 2013 I am a PhD student, working on GNSS meteorology. My work is closely related to the goals of COST project ES1206 "Advanced Global Navigation Satellite Systems tropospheric products for monitoring Severe Weather Events and Climate" (GNSS4SWEC). I am also a skilled science communicator with many TV and radio broadcasts, as well as articles in popular scientific magazines.

RESEARCH EXPERIENCE

- Sofia University GNSS Analysis Center (SUGAC) - responsible for GNSS data processing and tropospheric products retrieval.
- Sofia University Atmospheric Data Archive (SUADA) - responsible for database design and processing of GNSS data from Bulgaria.
- Sofia University SAT - preliminary study of nano-satellites. I am part of a team of specialists, designing a nano-satellite to serve for communication and collection of atmospheric data, mostly for the Bulgarian Antarctic Base. I was responsible for satellite positioning and GNSS radio occultations ideas.

EDUCATION

- **PhD in Meteorology**, Department of Meteorology and Geophysics, Sofia University "St. Kliment Ohridski", Bulgaria 2013 - 2016 (expected)
Research topic: GNSS Meteorology applications in Bulgaria.
- **MSc with honours in Meteorology**, Department of Meteorology and Geophysics, Sofia University "St. Kliment Ohridski", Bulgaria 2011 - 2013
Title of the thesis: Sofia University Atmospheric Data Archive (SUADA)
 - **ERASMUS** scholarship, University of Bern, Switzerland (winter semester 2012/2013)
- **BSc in Astrophysics, Meteorology and Geophysics**, Faculty of Physics, Sofia University "St. Kliment Ohridski", Bulgaria 2007 - 2011
Title of the thesis: GNSS Meteorology applications in Bulgaria.
 - Additional **BSc certificate** for teaching Physics and Astronomy in high schools, Faculty of Physics, Sofia University "St. Kliment Ohridski", Bulgaria 2009 - 2011

PRIZES AND AWARDS

- 2012 Famelab award from the Bulgarian National Television
- 2011 Alma Mater award of the Sofia University for excellence in research and study

COMPUTER LITERACY

- Operating systems: Unix/Linux, Windows
- Programming languages:
 - Proficient knowledge: bash, MySQL, Matlab, Grads, LaTeX
 - Basic knowledge: C, Fortran, MPI, OpenMP, html, Python

LANGUAGES

- Bulgarian: native
- English: fluent
- Russian: fluent
- Czech: working knowledge

PROJECTS

Ongoing:

- COST project ES1206 "Advanced Global Navigation Satellite Systems tropospheric products for monitoring Severe Weather Events and Climate" (GNSS4SWEC). I am a member of Working Group 1 (WG1), responsible for GNSS processing.
- EU FP7 Social Fund project BG051PO001-3.3.06 for raising of the qualification of PhD students at Faculty of Physics, Sofia University. I am in charge of science communication activities in the project.

Finished:

- Marie Curie International Reintegration Grant (FP7-PEOPLE-2010-RG) within the 7th European Community Framework Programme. My PhD supervisor, Guergana Guerova was the grant holder of this project, which started in January 2011 and was finished in December 2014. During this project I was involved in the development of the SUADA database and the SUADA web portal. As a part of this project two animation videos for the use of GNSS signals in Meteorology were produced.
- Sofia University Research Funds project "Sofia University GNSS Analysis Center". I was responsible for the administration of the project as well as for the processing of GNSS data.

SKILLS

- **Communication** Since 2012 I am involved in science communication in Bulgaria. I take part in science festivals, give talks in schools, take part in science-oriented TV and radio shows. As a part of an internship I worked for the Bulgarian National Television News department as a science correspondent. I am a member of FameLab International Alumni club.
- **Administration** Since 2013 I am involved in administering a project for developing a better environment for the PhD students in the Faculty of Physics of Sofia University. The project is funded by the EU FP7 Social Fund. I am in charge of science communication activities in the project.
- **Organization** I was involved in the organization of the ES1206 COST project Summer School in Varna, Bulgaria.
- **Collaboration** Between 2014 and 2015 I was part of the Sofia University Student Council (SC). As a representative of the PhD students at the university I was responsible for reviewing of projects, submitted by students to the SC; initiating new policies to complement the rights of students in the university; creation the new SC vademecum of rules and regulations.

FULL PUBLICATION LIST

REFEREED PUBLICATIONS

- A.1) Guerova, G., **Simeonov Tzv.**, and Yordanova, The Sofia University Atmospheric Data Archive (SUADA), Atmos. Meas. Tech., 7, 2153-2185, doi:10.5194/amtd-7-2153-2014, 2014.
- A.2) **Simeonov Tzv.**, K. Vassileva and G. Guerova, 2012. First results of application of ground-based GNSS meteorology in Bulgaria/Southeast Europe: case study 2007 heatwave. (Annuaire de l'Universite de Sofia St. Kliment Oxridski, v106, 2013)
- A.3) P. Dankov, M. Gachev, Z. Kiss'ovski, I. Krassimirov, D. Mateev, N. Neshev, O. Ognyanov, **Tzv. Simeonov**, V. Vassilev, K. Zlatkov, 2013. Small Communication Satellite Mission for Enhancement of Antarctic Investigations. (MIC2, Nagoya, Japan, 2013)

PUBLICATIONS IN CONFERENCE PROCEEDING

- B.1) G. Guerova, J. Morland and **Tzv. Simeonov**, GNSS and heat waves: case studies for 2003 and 2007, 3rd Int. Colloquium - Galileo Science, Copenhagen, Denmark, August-September 2011

REPORTS IN CONFERENCE PROCEEDINGS

- C.1) **Simeonov Tzv.**, D. Sidorov, N. Teferle, G. Guerova, E. Egova, K. Vasileva, I. Milev and G. Milev, "SUGAC: Sofia University GNSS Analysis Centre", FIG Annual Conference, 18-21/05/2015, Sofia, Bulgaria.
- C.2) **Simeonov Tzv.**, "Sofia University Atmospheric Data Archive - SUADA", 2nd National Physics Congress, 26-29/09/2013, Sofia, Bulgaria.
- C.3) Vladimirov E., **Tzv. Simeonov** and G. Guerova, "Multi - technique comparison of atmospheric water vapour for Sofia, Bulgaria". 22th International symposium Modern technologies, education and professional practice in geodesy and related fields, 9/11/2012, Sofia, Bulgaria.

POSTERS IN CONFERENCE PROCEEDINGS

- D.1) **Simeonov Tzv.**, D. Sidorov, N. Teferle, G. Guerova, E. Egova, K. Vasileva, I. Milev and G. Milev, "SUGAC: Sofia University GNSS Analysis Centre", EGU Annual Assembly 2015, Vienna, Austria, 13-17/04/2015.
- D.2) **Simeonov Tzv.**, D. Sidorov, N. Teferle, G. Guerova, E. Egova, K. Vasileva, I. Milev and G. Milev, "SUGAC: Sofia University GNSS Analysis Centre", IGS Workshop "Celebrating 20 Years of Service and looking forward toward the future", Pasadena, USA, 23-07/06/2014.
- D.3) Yordanova N., G. Guerova and **Tzv. Simeonov**, "Application of GNSS for severe weather events in Bulgaria: case study 2012", Second GfG2 Summer school 1-3/07/2013 Potsdam, Germany.
- D.4) Guerova G., **Tzv. Simeonov**, N. Irinchev, N. Svilenova, E. Vladimirov and R. Topchiyska "SUADA: Sofia University Atmospheric Data Archive", IGS workshop 23-27/07/2012 Olsztyn, Poland.

Simeonov Tzv., 2015. "Science and Hollywood" - a popular science talk at Sofia Science Festival.

Guerova G., Dimitrova Z. and **Simeonov Tzv.**, 2014. "The Ionosphere and GNSS: Explained" - a youtube.com video. https://www.youtube.com/watch?v=w-5Hl2b_wKE

Simeonov Tzv., 2014. "Weather forecast ... with GPS?" - a popular article in the Bulgarian version of BBC Knowledge magazine.

Guerova G., Topchiyska R. and **Simeonov Tzv.**, 2013. "GNSS Meteorology: Explained" - a youtube.com video. <https://www.youtube.com/watch?v=t1inZaRdWY4>

Simeonov Tzv., 2013. "Sketch science" - a popular science talk at Sofia Science Festival.

Simeonov Tzv., 2013. "The life of Super-Earths" - a reportage for Bulgarian National television channel BNT1
http://archive.bnt.bg/bg/news/view/113781/jivotyt_na_svryhzemite

Simeonov Tzv., 2013. "Seven moments from the future" - a documentary by Bulgarian National television channel BNT1
http://bnt.bg/bg/productions/104/edition/31261/v_kadyr_24_april_2013_sedem_miga_ot_bydeshteto

Simeonov Tzv., 2012. "Predicting earthquakes" - a reportage for Bulgarian National Television channel BNT1
http://bnt.bg/bg/news/view/78657/predskazvane_na_zemetresenija

Simeonov Tzv., 2012. "Forest fires risks" - a reportage for Bulgarian National Television channel BNT1
http://bnt.bg/bg/news/view/79594/vremeto_i_riskyot_ot_pojari

Simeonov Tzv., 2012. "Camp fire safety" - a reportage for Bulgarian National Television channel BNT1
http://bnt.bg/bg/news/view/80359/kak_bezopasno_se_pali_ogyn_v_gorata

Simeonov Tzv., 2012. "Sofia University satellite" - a reportage for Bulgarian National Television channel BNT1
http://bnt.bg/bg/news/view/81531/mladi_bylgarski_ucheni_s_proekt_za_spytnik

Simeonov Tzv., 2012. "Planet alignment and Perseid meteor shower" - a reportage for Bulgarian National television channel BNT1
http://bnt.bg/bg/news/view/82421/parad_na_zvezdite

Simeonov Tzv., 2012. "Heat waves and climate change" - a reportage for Bulgarian National television channel BNT1

http://bnt.bg/bg/news/view/82510/ekstremnite_jegi_shte_stanat_norma

Simeonov Tzv., 2012. "The 2012 Scientific Discoveries" - a reportage for Bulgarian National television channel BNT1

http://bnt.bg/bg/news/view/91981/nauchnite_otkritija_na_2012

REFEREES

Assoc. Prof. Guergana Guerova
Department Meteorology and Geophysics
Faculty of Physics
Sofia University
James Boucher blvd. 5a
Sofia 1618, Bulgaria
Phone: +359 899 310 545
email: guerova@phys.uni-sofia.bg
URL: http://suada.phys.uni-sofia.bg/?page_id=196

Dr Guergana Guerova is my BSc, MSc thesis supervisor. She is currently developing "Marie Curie International Reintegration Grant FP7-PEOPLE-2010-RG" and my work is directly linked to the objectives of this project.

Prof. Asen Pashov
Department Optics and Spectroscopy
Faculty of Physics
Sofia University
James Boucher blvd. 5a
Sofia 1618, Bulgaria
Phone: +359 2 8161 286
email: pashov@phys.uni-sofia.bg
URL: <http://optics.phys.uni-sofia.bg/AMS/team/Asen/>

Prof Pashov was supervising me, while I was working in the department of Optics and Spectroscopy.