

## IVANA TOŠIĆ-CURRICULUM VITAE (2023)

University of Belgrade - Faculty of Physics, Department for Meteorology  
P.O.B. 368, 11000 Belgrade, Serbia  
[itosic@ff.bg.ac.rs](mailto:itosic@ff.bg.ac.rs)  
[afrodita.rcub.bg.ac.rs/~itosic](http://afrodita.rcub.bg.ac.rs/~itosic)

Ivana Tošić was born in Kotor (1967), Montenegro.

### EDUCATION

1992 – B.Sc. in Meteorology, Belgrade University, Faculty of Physics, Serbia  
1997 – M.Sc. in Meteorology, Belgrade University, Faculty of Physics, Serbia  
2005 – Ph.D. Thesis, Belgrade University, Faculty of Physics, Serbia

### EMPLOYMENT

1992 –2007 Teaching and research assistant, Institute of Meteorology, Faculty of Physics, Belgrade University  
2007 – Assistant Professor, University of Belgrade - Faculty of Physics, Department for Meteorology  
2012 – Associate Professor, University of Belgrade - Faculty of Physics, Department for Meteorology  
2017 – Full Professor, University of Belgrade - Faculty of Physics, Department for Meteorology

### PROFESSIONAL INTERESTS

Climatology, Numerical modeling in meteorology and climatology, Climate change, Applied Meteorology, Atmospheric pollution transport

### SCIENTIFIC and TEACHING BOARDS

She is a member of the Scientific Expert Committee for Geosciences and Astronomy of the Serbian Ministry of Science, Technological Development and Innovation.  
She is a member of the Scientific Expert Board for the Natural Sciences at the University of Belgrade.  
She is a member of the Doctoral Collegium at the University of Belgrade-Faculty of Physics.  
She is a head of chair for General Meteorology at the University of Belgrade-Faculty of Physics.

### SELECTED PUBLICATIONS

#### a) TEXTBOOKS

- Gavrilov, M., **Tošić, I.**, Rančić, M., 2000: Solved problems in Modeling of the Atmosphere. Institute for Meteorology, Belgrade University, Belgrade (in Serbian), 192 pp.
- Unkašević, M., D. Vujović, **I. Tošić**, 2002: Solved problems in Climatology and Applied Meteorology. SHMZ, Belgrade (in Serbian), 238 pp.
- Unkašević, M., **Tošić, I.**, 2006:“Košava” wind, Academic mind, Belgrade (in Serbian), 82 pp.
- Vukmirović, Z., Unkašević, M., **Tošić, I.**, 2009: Atmospheric transport and deposition of persistent organic pollutants under warfare conditions, Springer-Verlag Berlin

Heidelberg, Handbook of Environmental Chemistry, Volume 3: Anthropogenic Compounds 3 U, pp. 171-208.

Dorđević, D., Đurašković, P., **Tošić, I.**, Unkašević, M., Ignjatović, Lj., 2012: Main Water-Soluble Ions in Precipitation of the Central Mediterranean Region in: Precipitation: Prediction, Formation and Environmental Impact. Dohring, H., Dixon, J., (Eds), Nova Publishers, pp. 137-149, ISBN: 978-1-62100-447-9.

Kržič, A., **Tošić, I.**, Rajković, B., Djurdjević, V., 2012: Some Indicators of the Present and Future Climate of Serbia According to the SRES-A1B Scenario in: Climate Change - Inferences from Paleoclimate and Regional Aspects. Berger, A.; Mesinger, F.; Šijački, Dj. (Eds.), Springer Berlin, pp. 227-239, ISBN 978-3-7091-0972-4.

Gavrilov B. M, **Tošić, I.**, Rančić, M., 2014: Numerical Methods in Meteorology: Solved problems. LAP LAMBERT, 172 pp.

Đurđević, V., **Tošić, I.**, 2017: Climate change. Belgrade University, Faculty of Physics, Institute for Meteorology, Belgrade (in Serbian), 206 pp.

**Tošić, I.**, Putniković, S., 2018: Heat waves in Serbia during the period 1961-2016 in: Advances in Environmental research, 63. Daniels J. (Ed.), Nova Publishers, pp. 205-230, ISBN: 978-1-53613-919-8.

[https://www.novapublishers.com/catalog/product\\_info.php?products\\_id=64958](https://www.novapublishers.com/catalog/product_info.php?products_id=64958)

## b) PAPERS

Author and coauthor over a hundred papers, mainly in international journals (Theoretical and Applied Climatology, International Journal of Climatology, Monthly Weather Review, Atmospheric Environment, Global and Planetary Change, Climatic Change, Meteorology and Atmospheric Physics, ...) and in conference proceedings.

**Tošić, I.**, Lazić, L., 1998: Improved Bora wind simulation using a nested Eta model. *Meteor. Atmos. Phys.*, **66**, 1-10.

Lazić, L., **Tošić, I.**, 1998: A real data simulation of the Adriatic Bora and the impact of mountain height on Bora trajectories. *Meteor. Atmos. Phys.*, **66**, 143-155.

Gavrilov, M., **Tošić, I.**, 1998: Propagation of the Rossby waves on two dimensional rectangular grids. *Meteor. Atmos. Phys.*, **68**, 119-125.

Unkašević, M., Mališić, J., **Tošić, I.**, 1999: Some aspects of the wind 'Koshava' in the lower troposphere over Belgrade. *Meteorol. Appl.*, **6**, 69-80.

Gavrilov, M., **Tošić, I.**, 1999: Dispersion characteristics of discrete quasigeostrophic modes. *Mon. Wea. Rev.*, **127**, 2197-2203

Vukmirović, Z., Unkašević, M., Lazić, L., **Tošić, I.**, 2001: Regional air pollution caused by a simultaneous destruction of major industrial sources in a war zone. The case of Serbia in april 1999. *Atmos. Env.*, **35**, 2773-2782.

Ničković, S., Gavrilov, M., **Tošić, I.**, 2002: Geostrophic Adjustment on Hexagonal Grids, *Mon. Wea. Rev.*, **130**, 668-683

Unkašević, M., Vukmirović, Z., **Tošić, I.**, Lazić, L., 2003: Effects of Uncontrolled Particulate Matter Release on Precipitation Under Warfare Conditions. *Environmental Science and pollution research (ESPR)*, **10**, 89-97.

Vukmirović, Z., Unkašević, M., Lazić, L., **Tošić, I.**, Rajšić, S., Tasić, M., 2004: Analysis of the Saharan dust regional transport. *Meteor. Atmos. Phys.*, **85**, 265-273.

- Djordjević, D., Vukmirović, Z., **Tošić, I.**, Unkašević, M., 2004: Contribution of dust transport and resuspension to particulate matter levels in the Mediterranean atmosphere. *Atmos. Env.*, **38**, 3637-3645.
- Unkašević, M., **Tošić, I.**, Vujović, D., 2004: Variability and probability of annual and extreme precipitation over Serbia and Montenegro, *Theor. Appl. Climatol.*, **79**, 103-109.
- Tošić, I.**, 2004: Spatial and temporal variability of winter and summer precipitation over Serbia and Montenegro, *Theor. Appl. Climatol.*, **77**, 47-56.
- Tošić, I.**, Unkašević, M., 2005: Analysis of precipitation series for Belgrade, *Theor. Appl. Climatol.*, **80**, 67-77.
- Unkašević, M., Vujović, D., **Tošić, I.**, 2005: Trends in extreme summer temperatures at Belgrade, *Theor. Appl. Climatol.*, **82**, 99-205.
- Unkašević, M., **Tošić, I.**, Obradovic, M., 2007: Spectral analysis of the “Koshava” wind. *Theor. Appl. Climatol.*, **89**, 239-244.
- Unkašević, M., **Tošić, I.**, 2009: Changes in the extreme daily winter and summer temperatures at Belgrade, *Theor. Appl. Climatol.*, **89**, 239-244.
- Unkasevic, M., **Tošić, I.**, 2009: An analysis of heat waves in Serbia, *Global Planet. Change*, **65**, 17–26.
- Djordjevic, D., **Tošić, I.**, Unkasevic, M., Djuraskovic, P., 2010: Water-soluble main ions in precipitation over the southeastern Adriatic region: chemical composition and long-range transport, *Environ. Sci. Poll. Res. (ESPR)*, **17**, 1591-1598.
- Unkašević, M., **Tošić, I.**, 2011: The maximum temperatures and heat waves in Serbia during the summer of 2007, *Climatic Change*, **108**, 207-223.
- Unkašević, M., **Tošić, I.**, 2011: A statistical analysis of the daily precipitation over Serbia: trends and indices. *Theor. Appl. Climatol.*, **106**, 69-78.
- Kržič, A., **Tošić, I.**, Djurdjević, V., Veljović, K., Rajković, B., 2011: Changes in climate indices for Serbia according to the SRES-A1B and SRES-A2 scenarios. *Clim. Res.*, **49**, 73-86.
- Đurašković, P., **Tošić, I.**, Unkašević, M., Ignjatović, Lj., Đorđević, D., 2012: The dominant contribution on wet deposition of water-soluble main ions in the South-Eastern Adriatic Region. *Central. Europ. J. Chem.*, **10**, 1301-1309.
- Tošić, I.**, Unkašević, M., 2013: Extreme daily precipitation in Belgrade and their links with the prevailing directions of the air trajectories. *Theor. Appl. Climatol.*, **111**, 97-107.
- Unkašević, M., **Tošić, I.**, 2013: Trends in temperature indices over Serbia: relationships to large-scale circulation patterns. *International Journal of Climatology*, **33**, 3152–3161.
- Hrnjak, I., Lukić, T., Gavrilov, M.B., Marković, S.B., Unkašević, M., **Tošić, I.**, 2014: Aridity in Vojvodina, Serbia. *Theor. Appl. Climatol.*, **115**, 323-332.
- Knežević, S., **Tošić, I.**, Unkašević, M., Pejanović, G., 2014: The influence of the East Atlantic Oscillation to climate indices based on the daily minimum temperatures in Serbia. *Theor. Appl. Climatol.* **116**, 435-446.
- Tošić, I.**, Unkašević, M., 2014: Analysis of wet and dry periods in Serbia. *International Journal of Climatology*. **34**, 1357–1368.
- Tošić, I.**, Hrnjak, I., Gavrilov, M.B., Unkašević, M., Marković, S.B., Lukić, T., 2014: Annual and seasonal variability of precipitation in Vojvodina, Serbia. *Theor. Appl. Climatol.*, **117**, 331-341.
- Unkašević, M., **Tošić, I.**, 2015: Seasonal analysis of cold and heat waves in Serbia during the period 1949–2012. *Theor. Appl. Climatol.*, **120**, 29-40.

- Bajat, B., Blagojević, D., Kilibarda, M., Luković, J., Tošić, I., 2015: Spatial analysis of the temperature trends in Serbia during the period 1961–2010. *Theor. Appl. Climatol.*, **121**, 289-301.
- Arsenović, P., **Tošić, I.**, Unkašević, M., 2015: Trends in combined climate indices in Serbia from 1961 to 2010. *Meteor. Atmos. Phys.*, **127**, 489-498.
- Mihajlidi-Zelić, D., Djordjević, D., Relić, D., **Tošić, I.**, Ignjatović, Lj., Stortini, M.A., Gambaro, A., 2015: Water-soluble inorganic ions in urban aerosols of the continental part of Balkans (Belgrade) during the summer – autumn (2008). *Open Chemistry*, **13**, 245-256.
- Tošić, I.**, Zorn, M., Ortar, J., Marković, S.B., Unkašević, M., Gavrilov, M.B., 2016: Annual and seasonal variability of precipitation and temperatures in Slovenia from 1961 to 2011. *Atmospheric Research*, **168**, 220-233.
- Perovich S. M., Čalasan, M., Kovač, D., **Tošić, I.**, 2016: Concerning an analytical solution of some families of Kepler's transcendental equation. *AIP Advances*, 6 (3). DOI <http://dx.doi.org/10.1063/1.4944836>.
- Gavrilov, M.B., **Tošić, I.**, Unkašević, M., Marković, S.B., Petrović, T., 2016: The analysis of annual and seasonal temperature trends using the Mann-Kendall test in Vojvodina, Serbia. *Idojaras*, **120**, 183-198.
- Putniković, S., **Tošić, I.**, Đurđević, V., 2016: Circulation weather types and their influence on precipitation in Serbia. *Meteor. Atmos. Phys.*, **128**, 649–662.
- Tošić, I.**, Unkašević, M., Putniković, S., 2017: Extreme daily precipitation: the case of Serbia in 2014. *Theor. Appl. Climatol.*, **128**, 785–794. doi:10.1007/s00704-016-1749-2
- Tošić, I.**, Gavrilov, M.B., Markovic, S., Ruman, A., Putniković, S., 2018: Seasonal prevailing surface winds in Northern Serbia. *Theor. Appl. Climatol.*, **131**, 1273–1284. DOI: 10.1007/s00704-017-2044-6.
- Putniković, S., **Tošić, I.**, 2018: Relationship between atmospheric circulation weather types and seasonal precipitation in Serbia. *Meteor. Atmos. Phys.*, **130**, 393–403. DOI 10.1007/s00703-017-0524-y.
- Radaković, M., **Tošić, I.**, Bačević, N., Mladjan, D., Gavrilov, M.B., Marković, S., 2018: The analysis of aridity in Central Serbia from 1949 to 2015. *Theor. Appl. Climatol.*, DOI: 10.1007/s00704-017-2220-8.
- Gavrilov, M.B., Marković, S.B., Schatzl, R.J., **Tošić, I.**, Zeeden, C., Obreht, I., Sipos, G., Ruman, A., Putniković, S., Emunds, K., Perić, Z., Hambach, U., Lehmkuh, F., 2018: Prevailing surface winds in Northern Serbia in the recent and past time periods; modern- and past dust deposition. *Aeolian Research*, **31**, 117-129. <http://dx.doi.org/10.1016/j.aeolia.2017.07.008>
- Putniković, S., **Tošić, I.**, Lazić, L., Pejanović, G., 2018: The influence of the East Atlantic Oscillation to climate indices based on the daily minimum temperatures in Serbia. *Atmos. Res.*, **213**, 465-475.
- Radaković, M., Gavrilov, M.B., Hambach, U., Schatzl, R.J., **Tošić, I.**, Ninkov, J., Vasin, J., Marković, S., 2019: Quantitative relationships between climate and magnetic susceptibility of soils on the Bačka Loess Plateau (Vojvodina, Serbia). *Quaternary International*, **502**, Part A, 85-94. <https://doi.org/10.1016/j.quaint.2018.04.040>
- Đorđević, D. S., **Tošić, I.**, Sakan, S., Petrović, S., Đuričić-Milanković, J., Christian Finger, D., Dagsson-Waldhauserova, P., 2019: Can volcanic dust suspended from surface soil and deserts of Iceland be transferred to Central Balkan similarly to African dust (Sahara)? *Front. Earth Sci.*, **7** (142), 1-12. <https://doi.org/10.3389/feart.2019.00142>
- Tošić, I.**, Mladjan, D., Gavrilov, M. B., Živanović, S., Radaković, M. G., Putniković, S., Petrović, P., Krstić Mistrizelović, I., Marković, S., 2019: Influence of meteorological variables on forest fire risk in Serbia during the period 2000-2017. *Open Geosciences*, **11**, 414-425. <https://doi.org/10.1515/geo-2019-0033>.

- Živanović, S., Ivanović, R., Nikolić, M., Đokić, M., **Tošić, I.**, 2020: Influence of air temperature and precipitation on the risk of forest fires in Serbia. *Meteorology and Atmospheric Physics*, 1-15.
- Živanović, S.V., **Tošić, I.**, 2020: Influence of climatic conditions on fire risk in Djerdap National Park (Serbia)-a case study of September 2011. *Thermal Science*, 24, Issue 5 Part A, Pages: 2845-285.
- Tošić, I.**, Živanović, S., Tošić, M., 2020: Influence of extreme climate conditions on the forest fire risk in the Timočka krajina region (Northeastern Serbia). *Idojaras*, 124(3), 331-347.
- Tošić, I.**, Putniković, S., 2021: Influence of the East Atlantic/West Russia pattern on precipitation over Serbia. *Theor. Appl. Climatol.* 146(3-4), pp. 997–1006.
- Tošić, I.**, Putniković, S., Tošić, M., Lazić, I., 2021: Extreme Temperature Events in Serbia in Relation to Atmospheric Circulation. *Atmosphere* 12(12), 1584.
- Tošić, I.**, Tošić, M., Lazić, I., Aleksandrov, N., Putniković, S., Djurdjević, V., 2023: Spatio-temporal changes in the mean and extreme temperature indices for Serbia. *Int. J. Climatol.*, 1–20. <https://doi.org/10.1002/joc.7981>.

## PROJECTS

### International

- (1998) EUROTRAC, Researcher
- (2007 – 2008) Scientific cooperation between research institutions for the study of airborne fine particles in Important Cities of the Adriatic area – SIMCA, INTERREG IIIA, financed by the European Union in frame of the Adriatic New Neighborhood Programme INTERREG/CARDS-PHARE. Researcher.
- (2007 – 2010) ADRICOSM-STAR - Adricosm integrated river basin and coastal zone management system: Montenegro coastal area and Bojana river catchment, financed by the Italian Ministry for the Environment, Land and Sea. Senior researcher. web: <http://gnoo.bo.ingv.it/adricosm-star/>. Researcher.
- (2019 – ) IS-ENES3 - Infrastructure for the European Network for Earth System Modelling - Phase 3, Funded by EU H2020. <https://portal.enes.org>. Researcher.

### National

- (1993-2000) Meteorological research, project financed by the Republic ministry of education, science and technology, Serbia. Researcher.
- (1997) Weather and climate, project financed by the Serbian Academy of Science and Arts. Researcher.
- (2001-2005) Extreme weather events in Serbia, project financed by the Republic Ministry of Education, Science and Technology, Serbia. Researcher.
- (2006-2010) Forecast of weather and climate in Serbia, project financed by the Republic Ministry of Education, Science and Technology, Serbia. Researcher.
- (2010) Initial National Communication of the Republic of Serbia under the United Nations Framework Convention on Climate Change, co-financed by the Global Environment Facility (GEF) and national government. National expert.
- (2011-2019) Meteorological extremes and climate change in Serbia, project financed by the Republic Ministry of Education, Science and Technology, Serbia. Project leader.

***h-index:*** 21

**Citations:** over 1000 (Scopus), 2000 (Google Scholar)

**Awards, prizes, etc. 2020** - WMO Science Award from the Borivoje Dobrilović Trust fund for the best research paper in the previous two years

**Reviewing scientific journals and grants.** *Atmospheric Research, Theoretical and Applied Climatology, Meteorology and Atmospheric Physics, International Journal of Climatology, Meteorological Applications, Hydrological Sciences Journal, Palaeogeography-Palaeoclimatology-Palaeoecology, Geofizika, Climate, Journal of the Geographical Institute "Jovan Cvijic" SASA, Arabian Journal of Geosciences, Earth Science Informatics, Atmosphere, Sustainability, Water, International Journal of Environmental Research and Public Health, Időjárás.*

#### **Skills**

- Programming: Fortran, Matlab
- Graphics: Grads, Xmgrace