Luka Ilić

CONTACT INFORMATION

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WORK EXPERIENCE

Institute of Physics Belgrade, Belgrade, Serbia — *Research Assistant*

JULY 2013 - PRESENT

- Development of Dust REgional Atmospheric Model (DREAM)
  - Parameterization of ice nuclei concentrations due to dust
  - Effects of dust mineral composition on ice nucleation efficiency
  - Investigating dust contribution to PM2.5 particle concentrations and health effects
- Operational DREAM forecasts for the PRE-TECT campaign
- Aerosol Raman LIDAR measurements in the frame of EARLINET
- DREAM verification using AERONET, EARLINET and surface measurements
- Maintenance of the Linux cluster and Vaisala weather station

www.ipb.ac.rs

dream.ipb.ac.rs

pre-tect.space.noa.gr

International School Savremena, Belgrade, Serbia — *Secondary School Mathematics Teacher*

SEPTEMBER 2018 - PRESENT

- Cambridge International AS level Mathematics part time teacher

www.savremena.org.uk

Chartwell International School Belgrade, Belgrade, Serbia — *Secondary School Mathematics Teacher*

OCTOBER 2017 - JUNE 2018

- Cambridge International Secondary Stage 8 and IGCSE level part time Mathematics teacher

www.chartwell.edu.rs

TECHNICAL SKILLS

Linux Server Administration (Slackware, Debian, Ubuntu) in research and operational weather forecasting.

FORTRAN Programming in numerical weather prediction and model development.

Python programming (Data visualisation and analysis).

GrADS use in research and operational weather forecasting.

Microsoft Office user.

WORKSHOPS AND SUMMER SCHOOLS

International High Performance Computing Summer School, Boulder, Colorado, USA, June 2017.

1st and 2nd LiCalTrain workshops in the ACTRIS-EARLINET quality assurance program at the LiCalTrain facility in Bucharest, Romania, May 2016 and February/March 2017.

Convective and Volcanic Clouds detection, monitoring and modeling organized by ISAC-CNR, INGV, NILU, ICTP, Oxford University in

South East European Virtual Climate Change Centre (SEEVCCC), Belgrade, Serbia — *Scientific Programmer in Numerical Weather Prediction*

NOVEMBER 2012 - SEPTEMBER 2013

- Non-hydrostatic Multiscale Global Model - wind speed verification and Model Output Statistics

www.seevccc.rs

South Environment and Weather Agency (SEWA), Belgrade, Serbia — *Scientific Programmer in Numerical Weather Prediction*

OCTOBER 2007 - JUNE 2013

- Operational numerical weather prediction system maintenance and development (Eta, WRF-NMM and NMM models)
  - Debian Beowulf cluster administration
  - Development of Linux shell and GrADS scripts for operational NWP
  - Model verification
  - Model output statistics
- Multi model - multi analysis ensemble development based on GFS initial and boundary conditions as inputs for Eta and WRF-NMM
- Porting of NWP models to HPC platforms (SEEGRID and Maxeler)
- Specialized forecast product deployment for road weather, construction, wind energy applications

www.sewa-weather.com

EDUCATION

University of Belgrade, Belgrade Serbia — *PhD, Meteorology*

OCTOBER 2012 - PRESENT

- PhD thesis topic: *Modelling of mineral dust transport as an agent of cloud processes*

University of Belgrade, Belgrade Serbia — *MSc, Meteorology*

OCTOBER 2004 - OCTOBER 2012

- MSc thesis title: *Improved wind forecasts for wind power generation using the Eta model and MOS (Model Output Statistics) Method*

Castiglione del Lago, Italy, October 2015

Online Integrated Modelling of Meteorological and Chemical Transport Processes summer school, EuMetChem – COST Action ES1040, University of Aveiro, Portugal, July 2014

The First Summer school of the EU-funded network "ITaRS - Initial Training for atmospheric Remote Sensing" - Aerosol Remote Sensing, Processes & Applications, ITaRS, National Institute for Research and Development in Optoelectronics, Bucharest, Romania, September 2013

Fall Colloquium on the Physics of Weather and Climate: Regional Weather Predictability and Modeling, ICTP - International Center for Theoretical Physics, Trieste, Italy, September 2008

LANGUAGES

Serbian (native speaker), **English** - Full Professional Proficiency (109 (89%) TOEFL score), **Russian** (basic understanding)

VOLUNTEERING EXPERIENCE

EASD - Environmental Ambassadors for Sustainable Development 2007-2009

National Projects:

III 43007 — *ongoing since 2011*

Investigation of climate change and its influences on environment – Monitoring the Influences, Adaptations, and Offsets

III 41011 — *ongoing since 2011*

Application of low temperature plasmas in biomedicine, environmental protection and nanotechnologies

International Projects:

InDust — 2017 - 2021

COST Action "International Network to Encourage the Use of Monitoring and Forecasting Dust Products"

www.cost-indust.eu

MASP — *2017 - 2019*

Mineral Aerosol Impacts to Sub-seasonal to Seasonal Predictability (ECMWF Special Project)

GEO-CRADLE— 2016 - 2018

 Coordinating and integRating state-of-the-art Earth Observation Activities in the regions of North Africa, Middle East, and Balkans and Developing Links with GEO related initiatives towards GEOSS (The GEO-CRADLE project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 690133.)

www.geocradle.eu

Vi-SEEM — *2015 - 2018*

Virtual Research Environment for regional communities in Southeast Europe and the Eastern Mediterranean (VI-SEEM receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 675121.)

www.vi-seem.eu

SEE-GRID-SCI — *2008 - 2010*

SEE-GRID eInfrastructure for regional eScience co-funded by the European Commission in the FP7 Research Infrastructures Framework

ADRICOSM STAR — 2007 - 2010

 ADRIatic sea integrated COastal areaS and river basin Management system: Montenegro Coastal Area and Bojana river catchment funded by Italian Ministry for the Environment and Territory

PUBLICATIONS

- Ilić, L., Kuzmanoski, M., Kolarž, P. Nina, A., Srećković, V., Mijić, Z., Bajcetic, J., Andrić, M., (2017). Changes of atmospheric properties over Belgrade, observed using remote sensing and in situ methods during the partial solar eclipse of 20 March 2015. Journal of Atmospheric and Solar-Terrestrial Physics. 10.1016/j.jastp.2017.10.001.
- M. J. Granados-Muñoz, F. Navas-Guzmán, J. L. Guerrero-Rascado, J. A. Bravo-Aranda, I. Binietoglou, S. N. Pereira, S. Basart, J. M. Baldasano, L. Belegante, A. Chaikovsky, A. Comerón, G. D'Amico, O. Dubovik, L. Ilic, P. Kokkalis, C. Muñoz-Porcar, S. Nickovic, D. Nicolae, F. J. Olmo, A. Papayannis, G. Pappalardo, A. Rodríguez, K. Schepanski, M. Sicard, A. Vukovic, U. Wandinger, F. Dulac, L. Alados-Arboledas, Profiling of aerosol microphysical properties at several EARLINET/AERONET sites during the July 2012 ChArMEx/EMEP campaign, Atmospheric Chemistry and Physics 16(11) (2016) 7043-7066
- L. Lazic, M. Anicic Uroševic, Z. Mijic, G. Vukovic, and L. Ilic (2016). Traffic contribution to air pollution in urban street canyons: Integrated application of the OSPM, moss biomonitoring and spectral analysis, Atmospheric Environment 141 (2016) 347-360
- A Stojic, S Stanišic Stojic, A Šoštaric, L Ilic, Z Mijic, S Rajšic, Characterization of VOC sources in an urban area based on PTR-MS measurements and receptor modelling, Environmental Science and Pollution Research, 22(17), 13137-13152
- Binietoglou, I., Basart, S., Alados-Arboledas, L., Amiridis, V., Argyrouli, A., Baars, H., Baldasano, J. M., Balis, D., Belegante, L., Bravo-Aranda, J. A., Burlizzi, P., Carrasco, V., Chaikovsky, A., Comerón, A., D'Amico, G., Filioglou, M., Granados-Muñoz, M. J., Guerrero-Rascado, J. L., Ilic, L., Kokkalis, P., Maurizi, A., Mona, L., Monti, F., Muñoz-Porcar, C., Nicolae, D., Papayannis, A., Pappalardo, G., Pejanovic, G., Pereira, S. N., Perrone, M. R., Pietruczuk, A., Posyniak, M., Rocadenbosch, F., Rodríguez-Gómez, A., Sicard, M., Siomos, N., Szkop, A., Terradellas, E., Tsekeri, A., Vukovic, A., Wandinger, U., and Wagner, J.: A methodology for investigating dust model performance using synergistic EARLINET/AERONET dust concentration retrievals, Atmos. Meas. Tech., 8, 3577-3600, https://doi.org/10.5194/amt-8-3577-2015, 2015.
- Papayannis, D. Nicolae, P. Kokkalis, I. Binietoglou, C. Talianu, L. Belegante, G. Tsaknakis, M.M. Cazacu, I. Vetres, L. Ilic, Optical, size and mass properties of mixed type aerosols in Greece and Romania as observed by synergy of lidar and sunphotometers in combination with model simulations: A case study, Science of the Total Environment 500−501 (2014) 277−294
- L. Lazic, M. Anicic Uroševic, Z. Mijic, G. Vukovic, and L. Ilic (2016). Traffic contribution to air pollution in urban street canyons: Integrated application of the OSPM, moss biomonitoring and spectral analysis. Atmospheric Environment 141 (2016) 347-360
- Lazar Lazić, Goran Pejanović, Momčilo živković, Luka Ilić, Improved wind forecasts for wind power generation using the Eta model and MOS (Model Output Statistics) method, Energy 73 (2014) 567-574
- Vassiliki Kotroni, Evangelos Floros, Konstantinos Lagouvardos, Goran Pejanovic, Luka Ilic, Momcilo Zivkovic, Multi-model multi-analysis ensemble weather forecasting on the grid for the South Eastern Mediterranean Region, Earth Science Informatics 01/2010; 3:209-218

CONFERENCES

- Ilic, L., Cvetkovic, B.,Pejanovic, G.,Petkovic, S., Kuzmanoski, M., Nickovic, S.(2018) Modeling of mineral composition effects on ice nucleation due to dust in Dust Regional Atmospheric Model (DREAM), EGU General Assembly 2018, 8-13 April, 2018 in Vienna Austria.
- Ilić, L., Cvetković, B., Ničković, S., Assessment of health effects of exposure to atmospheric mineral dust using the NMME-DREAM model, Earth's climate changes and impacts, Book of Abstracts, p. 67, October 11-13, 2017, Belgrade, Serbia
- Kuzmanoski, M., L. Ilić, M. Todorović, Z. Mijić, A study of a dust intrusion event over Belgrade, Serbia, The 6th international WeBIOPATR Workshop and Conference, Book of Abstracts, 6-8 September 2017, Belgrade, Serbia, p. 36
- L. Ilić, M. Kuzmanoski, Z. Mijić, Planetary Boundary Layer and Elevated Aerosol Layer Height Retrieval from Lidar Signal in Belgrade, 5th International WeBIOPATR Workshop & Conference Particulate Matter: Research and Management, October 14-16, 2015, Belgrade, Serbia, 77-84
- M. Kuzmanoski, L. Ilić, Z. Mijić, Aerosol remote sensing study of a Saharan dust intrusion episode in Belgrade, Serbia, XIX International Eco-Conference, September 25-27, Belgrade, Serbia, 73-81
- 1. Cvetkovic, B., Ilic, L., Madonna, F., Weber, D., Nickovic, S., Vukovic, A., Pejanovic, P., Nikolic, J., Bingemer, H., Vujadinovic, M., Djurdjevic, V. (2018) Modeling heterogeneous ice nucleation due to mineral dust using Dust Regional Atmospheric Model (DREAM-NMME), EGU General Assembly 2018, 8-13 April, 2018 in Vienna Austria.

- M. Kuzmanoski, S. Ničković, L. Ilić, Spatial distribution of mineral dust single scattering albedo based on DREAM model, EGU General Assembly 2016, 17-22 April, 2016 in Vienna Austria, p.4425,
- Mijić, Z., Ilić, L., Kuzmanoski, M., Raman lidar for atmospheric aerosol profiling in Serbia, 49th International October Conference on Mining and Metallurgy, Proceedings, pp. 65-68, October 18-21, 2017. Bor Lake, Serbia
- Zoran Mijić, Mirjana Perišić, Luka Ilić, Andreja Stojić, Maja Kuzmanoski, Air mass transport over Balkan region identified by atmospheric modeling and aerosol lidar technique, 49thInternational October Conference on Mining and Metallurgy, Proceedings, pp. 69-72, October 18-21, 2017. Bor Lake, Serbia.M33
- Mijić, Z., Ilić, L., Kuzmanoski, M., Vertical Raman LIDAR profiling of atmospheric aerosl optical properties over Belgrade, PHOTONICA 2017, Book of Abstracts, p. 210, August 28 - September 1, 2017, Belgrade, Serbia.
- Mijić Z., M. Perišić, A. Stojić, M. Kuzmanoski, L. Ilić, Estimation of atmospheric aerosol transport by ground-based remote sensing and modeling, XIX International Eco-Conference, September 25-27, Belgrade, Serbia, 375-382,
- Nickovic, S., Cvetkovic, B.,Pejanovic, G., Ilic, L., Dagsson-Waldhauserová, P., Arnalds, O., Brink, S. H., Jugoslav Nikolic, J., Petkovic, S.: PredictingatmosphericdustprocessfromIcelandicsoilsources, EGU General Assembly 2018, 9-13 April, 2018 in Vienna Austria,
- Vassilis, A., Marinou, E., Tsekeri, A., Solomos, S., Kottas, M., Proestakis, E., Konsta, D., Gkikas, A., Daskalopoulou, V., Tetoni, E., Gialitaki, A., Nicolae, D., Belegante, L., Ene, D., Andrei, S., Carstea, E., Stefanie, H., Dandocsi, A., Komppula, M., Kanakidou, M., Michalopoulos, N., Kalivitis, N., Kouvarakis, G., Rosoldi, M., Pappalardo, G., Campanelli, M., Binietoglou, I., Kazadzis, S., Raptis, P., Ulanowsk,J., Tesche, M., Mueller, D., Kezoudi, M., Smith, H., Marenco, F., Balis, D., Voudouri, K., Siomos, N., Nickovic, S., Cvetkovic, B., Ilic, L, Goloub P., Diemoz, H., Aslanoglu, Y., Estelles,V., Basart, S.,Eleftheriadis, K., Hloupis, G., Weinzierl, B. (2018) The Pre-TECT campaign - Revealing the secrets of desert dust, ELC, European Lidar Conference

GUEST PRESENTATIONS

- Presentation on parameterization of dust-induced ice nuclei concentration in DREAM model results in group of Dr Slobodan Nickovic. The talk was organized at Prof. Jennifer Kay's Polar and atmospheric science group meeting, at the Department of Atmospheric and Oceanic Sciences, University of Colorado at Boulder, July 5th, 2017.
- Presentation on dust modeling using DREAM model at Prof. Ulrike Lohmann's Atmospheric Physics Group Seminar at Institute for Atmospheric and Climate Science, ETH Zurich on November 26, 2016.