

PERSONAL INFORMATION

Irina ȘERPESCU

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WORK EXPERIENCE

2015 – Present **Hydrogeologist - National Institute of Hydrology and Water Management, Bucharest, Romania**

- Dimensioning the hydrogeological protected perimeter area,
- Expertise to hydrogeological studies for water supply,
- Modeling groundwater flow,

2010 – 2015 **Researcher - Groundwater Engineering Research Centre, Technical University for Civil Engineering - Bucharest, Romania**

- Sedimentary media analysis;
- 3D geological model of sedimentary media in Bucharest City (Romania);
- GIS-based geosciences modelling tools,
- Surface water/groundwater interaction modeling
- Quantifying groundwater storage and potential sustainable yield based on well logs,
- Tracking groundwater levels, pumping tests;
- Data processing in different formats (mainly GIS);
- Quantitative assessment of the urban groundwater sewer system interaction in Bucharest City;
- Geophysical investigation techniques in hydrogeology;
- Remote sensing in Civil Engineering applications.

EDUCATION AND TRAINING

2011 – present **Ph.D. Studies - Geological modelling, Hydrogeological modelling**

Technical University of Civil Engineering, Bucharest (Romania)

2009 – 2011 **Master of Sciences in Engineering Geology**

University of Bucharest, Faculty of Geology and Geophysics, Bucharest (Romania)

2005 – 2009 **Diploma of Engineer in Hydraulic Structures**

University of Bucharest, Faculty of Geology and Geophysics, Bucharest (Romania)

PERSONAL SKILLS

Research projects

- 2014 – 2016 “Current trends and approaches in urban hydrogeology” financed by Fund for Bilateral Relations of RO01 - Technical Assistance and Fund for Bilateral Relations at National Level Program, Technical University of Civil Engineering, Bucharest (Romania)
- 2010 - 2014: **Researcher** - Sedimentary Media Modeling Platform for Groundwater Management in Urban Areas - SIMPA”, project POS CCE, Cod SMIS – CNRS 12604.

2010 – 2013, Technical University of Civil Engineering, Bucharest (Romania)

- 2013 - 2015: **Researcher** – "Integrated service for urban subsidence phenomena based on space-borne interferometric synthetic aperture radar (InSAR) and hydrogeological-geotechnical hybrid modeling (SIRYS)" – project financed by the European Space Agency) www.ccias.ro/sirys
- 2012 - 2015 – "Integrated landslide detection system using ground and space-borne monitoring techniques in Romania (ILUSTRO)", project funded by the Romanian Space Agency, (STAR project).

Research reports

- Member of a consultancy team for the water supply operator Apa Nova Bucharest, Romania through the project "Services of the elaboration of a complex study on the geological profile of the vicinity of the main sewer collector - Caseta in Bucharest City"
- Urban hydrogeological modeling to determine the interaction between the aquifer system and sewer system at Bucharest city scale, in the frame of the collaboration between Technical University of Civil Engineering of Bucharest and water operator of Bucharest City SC Apa Nova Bucuresti SA
- Transient state urban groundwater flow model to study the hydrogeological impact of the tunneling and their associated dewatering works from the subway line M5
- Quantitative hydrogeological assessment on the implementation of the new principal drain in Bucharest City, Romania, in the frame of the collaboration between Technical University of Civil Engineering of Bucharest and water operator of Bucharest city SC Apa Nova Bucuresti SA
- Quantitative hydrogeological assessment on the A0 and B0 collectors rehabilitation in Bucharest City, Romania, in the frame of the collaboration between Technical University of Civil Engineering of Bucharest and water operator of Bucharest city SC Apa Nova Bucuresti SA
- Groundwater flow and contaminant transport modeling to define a groundwater quality monitoring within the Wastewater Treatment Plant Glina – Bucharest city , Romania, in the frame of the collaboration between Technical University of Civil Engineering of Bucharest and water operator of Bucharest city SC Apa Nova Bucuresti SA
- Quantitative assessment of the interaction between groundwater and Circului Lake from Bucharest City, Romania due to the Urban development, in the frame of the collaboration between Technical University of Civil Engineering of Bucharest and National Administration of Romanian Water (ANAR)
- Electrical resistivity geophysical services – sounding and interpretation for the Electrical Station of Salbatica-Tulcea County, Romania. Beneficiary: SAIDEL Engineering SRL
- Technical expertise and hydrogeological study for La Elice zone, Galati City, Romania. ERT geophysical investigations and urban hydrogeological modeling of a geotechnical instability. Beneficiary: Galati city-Hall

Negotiations/Workshops

- Member of the organization committee – 3rd Urban hydrogeology workshop (13-15 May 2016) in the frame of "Current trends and approaches in urban hydrogeology" project financed by Fund for Bilateral Relations of Programme RO01 - Technical Assistance and Fund for Bilateral Relations at National Level, Technical University of Civil Engineering, Bucharest (Romania)
- Member of the organization committee - international workshop: "Geodata openness initiative in Romania", 7 February 2013, Bucharest, <http://geoidea.ro/en/bucharest.html>
- Member of the organization committee - international workshop: 1st Urban hydrogeology workshop in the frame of "Progresses and challenges in hydrogeological

modeling of urban environment - support for management and effective protection of groundwater" project, 10-11 December 2012, Bucharest, <http://www.cciias.utcb.ro/we/>

Mother tongue(s) Romanian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	A2	A2	A2	A2	A2
Russian	B2	A1	B2	B1	A1

Levels: A1/2: Basic user - B1/2: Independent user - C1/2 Proficient user
Common European Framework of Reference for Languages

Papers and proceedings

- Boukhemacha, Mohamed Amine., Gogu, Constantin Radu., **Serpescu, Irina.**, Gaitanaru, Dragoş Ştefan., Bica, Ioan. General aspects on urban hydrogeology and highlights from Bucharest (Romania), Environmental Engineering and Management Journal, Volume.14, no 6, 1279-1285 pp, ISSN 1582-9596, June 2015
- Mohamed Amine Boukhemacha, Constantin Radu Gogu, **Irina Serpescu**, Dragos Gaitanaru, Ioan Bica. A hydrogeological conceptual approach to study urban groundwater flow in Bucharest city, Romania. Hydrogeology Journal, Springer-Verlag Berlin Heidelberg 2015; DOI: 10.1007/s10040-014-1220-3
- Gogu R.C, **Serpescu.I.**, Perju.S, Gaitanaru. D, Bica.I. - Urban Groundwater Modeling Scenarios to Simulate Bucharest City Lake Disturbance, International Multidisciplinary Scientific GeoConference: SGEM: Surveying Geology & mining Ecology Management, Martie 2015, Bulgaria.
- **Serpescu I**, Gogu R C, Boukhemacha M A, Gaitanaru D. "3D geological model to support the management of urban subsurface environment: Bucharest City case study". 8th European Congress on Regional Geoscientific Cartography and Information Systems (EUREGEO), Barcelona; 06/2015
- **I. Serpescu**, E. Radu C.R. Gogu, M.A. Boukhemacha, D. Gaitanaru, I. Bica (2013) A model of the Quaternary geological deposits of Bucharest City. In EGU General Assembly 2013, Vienna, Austria
- Boukhemacha, M.A., Gogu, C.R., **Serpescu, I.**, Diaconescu, A., Brusten, A. Hydraulic characterizing of tunnel's barrier effect for groundwater flow modeling- application for Bucharest city. International Multidisciplinary Scientific GeoConference Surveying Geology and Mining Ecology Management, SGEM 2, pp. 179-186, 2013
- M.A. Boukhemacha, C.R. Gogu, **I. Serpescu**, D. Gaitanaru, A. Diaconescu, A. Priceputu, I. Bica, and A. Brusten (2013) On the hydraulic characterizing of the quaternary sedimentary media of Bucharest City. EGU General Assembly 2013, Vienna, Austria
- C.R. Gogu, M.A. Boukhemacha, D. Gaitanaru, , **I. Serpescu**, A. Brusten and I. Bica (2013) Groundwater and Uebanism – "The fifth conference Old and new in Urbanism Architecture and Construction", Bucharest, Romania
- **Serpescu I**, E. Radu, C.R. Gogu, M.A. Boukhemacha et al. (2013) 3D GEOLOGICAL MODEL OF BUCHAREST CITY QUATERNARY DEPOSITS, 1-7. InInternational Multidisciplinary Scientific GeoConferences (SGEM). DOI:10.5593/SGEM2013/BA1.V2/S02.001
- O.Ş. Ciugulea, D. Găitanaru, **I. Şerpescu** (2012). The study of the interaction between groundwater and surface water for a pilot area in Bucharest City. In INHGA - International

Scientific Conference: "Hydrological Hazards and Associated Risks Management", Bucharest, Romania.

- **I. Serpescu**, E. Radu C.R. Gogu, M.A. Boukhemacha, D. Gaitanaru, I. Bica (2012) 3D geological model as a tool in hydrogeological research. Case study: A pilot area in Bucharest City. In INHGA - International Scientific Conference: "Hydrological Hazards and Associated Risks Management", Bucharest, Romania.
- **I. Serpescu**, E. Radu, C.R. Gogu, A. Priceputu, M.A. Boukhemacha, I. Bica, D. Gaitanaru (2012) 3D geological model developed to analyse the aquifer - sewer network interaction in Bucharest city. In EGU General Assembly 2012, Vienna, Austria.

Computer skills

- Good knowledge of graphic design applications (Illustrator™, Microsoft Visio™)
- Good command of MicrosoftOffice™ tools (Word™, Excel™ and PowerPoint™)
- Strong knowledge in ARC-GIS, ARC/INFO (ESRI) Geographical Information System (GIS) packages, GMS (Groundwater Modelling Software), Surfer, RockWorks, AutoCAD

Bucharest, 10.06.2016

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