

## Aurel Persoiu Tîrîtu

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### Education

PhD Geology	2011	University of South Florida, Tampa, USA
Advanced Studies Degree Geomorphology	2002	Babeș - Bolyai University, Cluj Napoca, Romania
BSc Geography	2000	Babeș - Bolyai University, Cluj Napoca, Romania

### Employment

10/2011-	Senior researcher and director of the Stable Isotope Laboratory, University of Suceava, Romania
08/2006-06/2011	TA/RA, Department of Geology, University of South Florida, Tampa, USA
07/2005-10/2005	GIS analyst, WWF, Vienna, Austria
01-06/2005	Teaching assistant, Faculty of Sciences, Lucian Blaga University, Sibiu, Romania
10/2003-08/2006	Research assistant (1/2), Emil Racoviță Institute of Speleology, Romanian Academy, Cluj Napoca
06/2002-09/2003	Research Associate, 'Project Apuseni', University of Freiburg, Germany
09/2000-08/2002	Science teacher, Cășeiu Middle School, Romania

### Honors and Awards

2010	Richard A. Davis jr. Fellowship for best PhD student, Dept of Geology, University of South Florida, USA
2009	Fred L. & Helen M. Tharp Endowed Fellow, University of South Florida, USA
2008	Ralph W. Stone Graduate Fellowship, National Speleological Society, USA
2008	Fred L. & Helen M. Tharp Endowed Fellow, University of South Florida, USA
2007	Samuel Y. Fustukjian Memorial Scholarship, University of South Florida Library, Tampa, USA
2007	Dean's Excellency Award, College of Arts and Science, University of South Florida, USA
2006	Dean's Excellency Award, College of Arts and Science, University of South Florida, USA
2006	Best Poster Award, HOLIVAR 2006 Open Science Meeting, London, UK
2001	Best Paper Award, 8 <sup>th</sup> National Congress of Student Geographers, Bucharest, Romania
2000	Best Paper Award, 7 <sup>th</sup> National Congress of Student Geographers, Bucharest, Romania
1999	Best Paper Award, National Congress of Student Geographers, Târgoviște, Romania
1998-1999	Babeș-Bolyai University Performance Fellowship for Outstanding Research (while BSC student)

### Research grants awarded (as PI or co-PI)

01.2015-12.2016	Quantification of the climate – speleothem stable isotopes relationships on a W-E European transect (CNRS France and UEFISCDI Romania, co-PI with Dominique Genty, LSCE, Gif-sur-Yvette, France)
07.2014-06.2015	Water stable isotope study of the climate-river discharge relationship(s) in the Lower Danube Watershed (IAEA, CRP on Stable Isotopes in Large Rivers)
06.2014-05.2017	Forest response to climate change predicted from multicentury climate proxy-records in the Carpathian region (Research Council of Norway, co-PI with 4 others at the University of Suceava)
01.2013-12.2014	$\delta^{18}\text{O}$ in precipitation and tree rings - climate relationship in Hungary and Romania along a West-East humidity gradient (Romanian University Research Council, co-PI with Zoltán Kern, Hungarian Academy)
10.2011-09.2014	RoIsoscapes - understanding the link between climate and stable isotopes in precipitation, drip water and newly precipitated cave calcite, in Romania (Romanian University Research Council)
09.2009-08.2010	Late Holocene climate changes recorded in perennial ice accumulation in caves (Cave Conservancy Foundation)
01.2008-12.2008	Assessment of the palaeoclimatic records preserved in perennial ice accumulations in caves (National Speleological Society)
03.2007-02.2008	Testing and validating the palaeoclimatic significance of perennial ice accumulations in caves (Geological Society of America)
01.2007-12.2007	Reconstruction of past climate changes using ice in caves as source of palaeoclimatic data (Sigma XI - Grant-in-aid of research)
01.2006-12.2007	Establishment of relations between stable isotopes - palaeoclimatic information in ice from caves (Romanian University Research Council).

## Articles

## Revised/in press

16. Iţcuş, C., Pascu, M.-D., Hillebrand-Voiculescu, A., Brad, T., **Perşoiu, A.**, Onac, B.P., Purcărea, C., *submitted*, Chronological distribution of cultured and uncultured bacteria in perennial cave ice. *FEMS Microbiology Ecology*.
15. Mulec, J., Oarga, A., Schiller, E., **Perşoiu, A.**, Holko, L., Šebela, S., *revised*, Assessment of the physical environment of epigean invertebrates in a unique habitat according to water temperature, chemistry and isotopic composition: the case of a karst sulphidic spring, Slovenia, *Ecohydrology*.
14. Feurdean, A., **Perşoiu, A.**, Tanţău, I., Stevens, T., Markovic, Magyari, E.K., Onac, B.P., Andric, M., Connor, S., Galka, M., Hoek, W.Z., Lamentowicz, M., Sümegi, P., Perşoiu, I., Kolaczek, P., Kunes, P., Marinova, E., Slowinski, M., Michczynska, D., Stancikaite, M., Svensson, A., Veski, S., Fărcaş, S., Tămaş, T., Zernitskaya, V., Timar, A., Tonkov, S., Toth, M., Willis, K.J., Plóciennik, M., Gaudeny, T. *in press*, Climate variability and associated vegetation response throughout Central and Eastern Europe (CEE) between 8 and 60 kyrs ago, *Quaternary Science Reviews*, DOI: 10.1016/j.quascirev.2014.06.003.
13. Moreno, A., Svensson, A., Brooks, S.J., Connors, S., Engels, S., Fletcher, W., Genty, D. Heiri, O., Labuhn, I., **Perşoiu, A.**, Peyron, O., Sadori, L., Valero-Garcés, B., Wulf, S., Zanchetta, G. and data contributors, *in press*, A compilation of Western European terrestrial records 60-8 ka BP: towards an understanding of latitudinal climatic gradients, *Quaternary Science Reviews*. DOI: 10.1016/j.quascirev.2014.06.030.
12. Hillebrand-Voiculescu, A., Iţcuş, C., Ardelean, I., Pascu, M.D., **Perşoiu, A.**, Rusu, A., Brad, T., Popa, E., Onac, B.P., Purcărea, C., *in press*, Searching for cold-adapted microorganisms in the underground glacier of Scărişoara Ice Cave, Romania, *Acta carsologica*.

## Published

11. Žák, K., Orvošová, M., Filippi, M., Vlček, L., Onac, B.P., **Perşoiu, A.**, Rohovec, J., Světlík, I., 2013, Cryogenic cave pearls in the periglacial zones of ice caves, *Journal of Sedimentary Research*, 83: 207-220. DOI: 10.2110/jsr.2013.16.
10. Kern, Z., **Perşoiu, A.**, 2013, Cave ice - the imminent loss of untapped mid-latitude cryospheric palaeoenvironmental archives, *Quaternary Science Reviews*, 67: 1-7. DOI: 10.1016/j.quascirev.2013.01.008
9. Moldovan, O., Meleg, I., **Perşoiu, A.**, 2012, Habitat fragmentation and its effects on groundwater populations. *Ecohydrology*, 5 (4): 445-452. DOI: 10.1002/eco.237.
8. **Perşoiu, A.**, Onac, B.P., Perşoiu, I., 2011, The interplay between air temperature and ice dynamics in Scărişoara Ice Cave, Romania. *Acta Carsologica*, 40 (3): 445-456.
7. Feurdean A., **Perşoiu, A.**, Pazdur, A., Onac, B.P., 2011, Evaluating the palaeoecological potential of pollen recovered from ice in caves: a case study from Scărişoara Ice Cave, Romania. *Review of Palaeobotany and Palynology*, 165 (1-2): 1-10. DOI: 10.1016/j.revpalbo.2011.01.007.
6. **Perşoiu, A.**, Pazdur, A., 2011, Ice genesis and its long-term mass balance and dynamics in Scărişoara Ice Cave, Romania. *The Cryosphere*, 5 (1): 45-53. DOI: 10.5194/tc-5-45-2011.
5. **Perşoiu, A.**, Onac, B.P., Wynn, J., Bojar, A.-V., Holmgren, K., 2011, Stable isotopes behavior during cave ice formation by water freezing in Scărişoara Ice Cave. *Journal of Geophysical Research - Atmospheres*, 116, D02111. DOI: 10.1029/2010JD014477.
4. Bojar, A.-V., Ottner, F., Bojar, H.-P., Grigorescu, D., **Perşoiu, A.**, 2009, Stable isotope and mineralogical investigations on clays from the Late Cretaceous sequences, Haţeg Basin, Romania. *Applied Clay Science*, 45 (3): 155-163. DOI: 10.1016/j.clay.2009.04.005
3. Kern, Z., Molnár, M., Svingor, É., **Perşoiu, A.**, Nagy, B., 2009, High resolution, well preserved tritium record in the ice of Borţig Ice Cave (Bihar Mts., Romania). *The Holocene*, 19 (5): 729-736. DOI: 10.1177/0959683609105296.
2. Žák, K., Onac, B.P., **Perşoiu, A.**, 2008, Cryogenic carbonates in cave environments: a review. *Quaternary International*, 187 (1): 84-96. DOI: 10.1016/j.quaint.2007.02.022.
1. Holmlund, P., Onac, B. P., Hansson, M., Holmgren, K., Mörth, M., Nyman, M., **Perşoiu, A.**, 2005, Assessing the palaeoclimate potential of cave glaciers: the example of Scărişoara Ice Cave (Romania). *Geografiska Annaler*, 87 A (1): 193-201. DOI: 10.1111/j.0435-3676.2005.00252.x.

## Books, chapters in books

4. **Perşoiu, A.**, Chirionco, M., *in press*, *Cave*. In Hargitai, H., Kereszturi, Á. (eds.) *Encyclopedia of Planetary Landforms*, Springer.
3. **Perşoiu, A.**, Onac, B.P., 2012, *Ice in caves*. In White, W., Culver, D.C. (eds.) *Encyclopedia of Caves*, Elsevier, pp. 399-404.
2. Onac, B.P., **Perşoiu, A.**, Racoviţă, G., Tămaş, T., Viehmann, I., 2007, *Scărişoara Ice Cave and its surroundings*. *Studia*, Cluj Napoca, 88 p.
1. Onac, B.P., Tămaş, T., Constantin, S., **Perşoiu, A.** (Eds.), 2006, *Archives of climate change in karst*. Karst Waters Institute Special Publication 10, Charles Town, 246 p.

**Invited lectures**

8. *Paleoclimate reconstruction from Central and Eastern Europe*. INTIMATE Workshop on Western Europe Terrestrial Records, Zaragoza, Spain, November 30, 2012.
7. *Dinosaurs, Milankovitch and coal: a history of climate change*. Ştefan cel Mare University, Suceava, Romania, May 16, 2012.
6. *Ice in caves: a novel paleoclimatic archive*. Laboratoire de Glaciologie et Géophysique de l'Environnement, Université Joseph Fourier, Grenoble, France, July 5, 2011.
5. *Protection and management of ice caves in Romania from the side of caving clubs*. 19<sup>th</sup> International Karstological School, Postojna, Slovenia, June 21, 2011.
4. *Reconstruction of Holocene climate history in central Europe using ice cores of caves in Romania*. University of Freiburg, Germany, June 2, 2010.
3. *Holocene climate history recorded in a Central European cave ice deposit*. Bert Bolin Climate Centre Annual Meeting, Stockholm, Sweden, September 16-17, 2009.
2. *Accumulation of ice in Scărișoara Ice Cave, in relation with past and present climatic conditions*. Workshop on Absolute ages and their applications in archeology, geology and environmental science, Alba Iulia, Romania, August 29-30, 2008.
1. *Apuseni Mountains, Romania - Climate, paleoclimate and climate change*. Impact of climate changes on subterranean life: challenge for protection Workshop, Gârda de Sus, Romania, May 20-22, 2008.

**Professional Activities**

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| 2014      | Co-convener, Past and present climate: the continental isotopic record, European Geosciences Union General Assembly, Vienna, Austria.  |
| 2013-2014 | Guest Editor, Quaternary International.  |
| 2013-     | Vice-president, Glacier, Firn and Ice Caves Commission, International Speleological Union.   |
| 2012-2014 | Romanian coordinator, EU-COST action INTIMATE (INTEgrating Ice core, MARine and TERrestrial records - 60,000 to 8000 years ago).   |
| 2012-     | Member of the National Commission for Antarctic Research, Romanian Academy.  |
| 2012-2013 | Member of the Romanian National Research Council (CNCS), Earth Science Commission.   |
| 2012      | Member of the Scientific Committee, 5 <sup>th</sup> International Workshop on Ice Caves, Barzio, Italy.  |
| 2012      | Co-convener, IG5/CL5.8/SSP5.3 Stable isotopes as a tool in (palaeo-)climate studies in different environments and by multi-proxy approaches, European Geosciences Union General Assembly, Vienna, Austria.   |
| 2011      | Program committee member, 19 <sup>th</sup> International Karstological School, Postojna, Slovenia.   |
| 2011      | Co-convener, CR11.20 Ice deposits in caves: formation, evolution and climate-environment assessment session, European Geosciences Union General Assembly, Vienna, Austria.   |
| 2010      | Program committee member, 18 <sup>th</sup> International Karstological School, Postojna, Slovenia.   |
| 2007-2009 | President, Working Group on Ice Caves, International Speleological Union.  |
| 2007      | Scientific advisor to National Geographic Romania on glaciology.   |
| 2006-2010 | Co-organizer, "Best of Karst" Events, University of South Florida, Tampa, USA.   |
| 2006-2007 | Romanian coordinator, Agreement of Scientific Co-operation in the field of karstology, palaeokarstology, speleology and cave environment, between the "Emil Racoviță" Institute of Speleology (Romania) and the Institute of Geology - Czech Academy of Science. |
| 2006      | Co-organizer, 18 <sup>th</sup> International Symposium of Biospeleology Cluj Napoca, Romania.  |
| 2006      | Co-organizer, 4 <sup>th</sup> Climate Change: the Karst Record Conference, Băile Herculane, Romania.   |
| 2004      | Co-organizer, 10 <sup>th</sup> European meeting of Environmental Science Students, Sibiu, Romania.   |
| 2004      | Co-organizer, 1 <sup>st</sup> International Workshop on Ice Caves, Căpuș, Romania.   |

I have co-authored and presented over 60 papers at various conferences; some of the attendance costs being supported by 16 grants awarded by the EGU, PAGES, ESF, EU-COST Action, Marie Curie Program, GSA, NSF etc.