

## **CURRICULUM VITAE**



2010-2012: **NSF** - *Sea level changes into MIS 5: from observations to predictions (PI)* -  
**\$23,234.**

2008-2012: **NSF (P2C2)** -

Switzerland, Norway, Sweden, Puerto Rico, Greece, Poland, Slovenia, Belgium, Spain, Austria, Serbia, Croatia, Czech Republic, and Mexico.

**Field work:** I have participated on various Karst or Quaternary Geology field

2025

**William B. and Elizabeth L. White Medal for Excellence in Karst Studies**  
(presented by the Karst Waters Institute)

## List of published papers

(underlined: student advised; \* corresponding author)

### **Books:**

1. Ponta, G.M.L, **Onac, B.P.** (Eds.) 2019:

2. **Onac, B.P.**, Veres, D.S., Stringer, C. 2021: *Hominim footprints in caves from Romanian Carpathians*. In: Reading Prehistoric human tracks (Pastoors, A., Ed.). Springer, Cham, p. 201-210. [https://doi.org/10.1007/978-3-030-60406-6\\_12](https://doi.org/10.1007/978-3-030-60406-6_12)
3. **Onac, B.P.** 2019: *Minerals in caves*. In: *Encyclopedia of Caves* (3<sup>rd</sup> ed., White, W.B., Culver, D.C., Pipan, T., Eds.), Academic Press, New York, 699-709.
4. Persoiu, A., **Onac, B.P.** 2019: *Ice in Caves*. In: *Encyclopedia of Caves* (3<sup>rd</sup> ed., White, W.B., Culver, D.C., Pipan, T., Eds.), Academic Press, New York, 553-558.
5. Zak, K., **Onac, B.P.**, Kadebskaya, O.I., Filippi, M., Dublyansky, Y., Luetscher, M. 2018: Cryogenic mineral formation in caves. In: *Ice caves* (Persoiu, A. & Lauritzen,

18. **Onac, B.P.**, Constantin, S. 2003: *Europe, Balkans and Carpathians*. In: *Encyclopedia of Caves and Karst Science* (Gunn, J., Ed.), Fitzroy Dearborn, New York, p. 328-331.
19. Dorale, J.E., Edwards, R.L., **Onac, B.P.** 2002: Stable isotopes as environmental indicators in speleothems. In: *Karst Processes and the Carbon Cycle. Final Report of IGCP 379* (Yuan, D. & Zhang, C., Eds.), Geological Publishing House, Beijing, 107-120.
20. **Onac, B.P.** 1997: *Crystallography of speleothems*. In *Cave Minerals of the World* (ed. 2, Hill, C.A. & Forti, P., Eds.) NSS, Huntsville, Alabama, 230-236.

### **Articles in peer-review (ISI) journals**

(underlined: student advised; \* corresponding author)

1. **Onac, B.P.**, Polyak, V.J., Mitrovica, J.X., Ginés, J., Gràcia, F., Fornós, J.J., Ginés, A., Asmerom, Y. 2024: New evidence for human arrival in Mallorca prior to 6000 years ago. *Communication Earth and Environment*, **5**: 457
2. Palma, V., De la Rosa, J.M., **Onac, B.P.**, Sauro, F., Martínez-Frías, J., Caldeira, A.T., González-Pérez, J.A., Jimenez-Morillo, N.T., Miller, A.Z. 2024: Decoding organic compounds in lava tube sulfates to understand potential biomarkers in the Martian subsurface. *Communication Earth and Environment*



Exceptionally stable pre-industrial sea level inferred from the western Mediterranean Sea. *Science Advances*, **8**: eabm6185 (cover article).

12. Polyak, V.J., Provencio, P., Asmerom, Y., Davis, D.G., **Onac, B.P.**, Palmer, A.N., Palmer, M.V. 2022: Timing of sulfuric acid speleogenesis (SAS) as an indicator of canyon incision rates of the Shoshone and Bighorn rivers, Wyoming, USA. *Geomorphology*, **410**: 108281.
13. Dumitru, O.A., Polyak, V.J., Asmerom, Y., **Onac, B.P.** 2021: Last interglacial (sensu lato, ~130 to 75 ka) sea level history from cave deposits: a global standardized database. *Earth System Science Data*, **13**: 2077-2094.
- 14.

26. Ersek, V., **Onac, B.P.**, Persoiu, A. 2018: Kinetic processes and stable isotopes in cave dripwaters as indicators of winter severity. *Hydrological Processes*, **32**: 2856-2862; DOI: 10.1002/hyp.13231
27. Cleary, D.M., **Onac, B.P.**, Tantau, I., Wynn, J.G., Forray, F.L., Ionita, M., Tamas, T. 2018: A guano-derived  $\delta^{13}\text{C}$  and  $\delta^{15}\text{N}$  record of climate since the Medieval Warm Period in NW Romania. *Journal of Quaternary Science*, **33 (6)**: 677-688; doi: 10.1002/jqs.3044
28. Dumitru, O.A., **Onac, B.P.**, Polyak, V.J., Wynn, J.G., Asmerom, Y., Fornós, J.J. 2018: Climate variability in the western Mediterranean between 121 to 67 ka derived from a Mallorcan speleothem record. *Palaeogeography, Palaeoclimatology, Palaeoecology*, **506**: 128-138.
29. van Hengstum, P.J., Maale, G., Donnelly, J.P., Albury, N.A., **Onac, B.P.**, Sullivan, R.M., Winkler, T.S., Tamalagave, A.E., MacDonald, D. 2018: Drought in the northern Bahamas from 3300 to 2500 years ago. *Quaternary Science Reviews*, **186**: 169-185.
30. Cleary, D.M., Wynn, J.G., Ionita, M., Forray, F.L., **Onac, B.P.\*** 2017: Evidence of long-term NAO influence on East-Central Europe winter precipitation from a guano-derived  $\delta^{15}\text{N}$  record.

40. Forray, F.L., **Onac, B.P.**, Tantau, B., Wynn, J.G., Tamas, T., Coroiu, I., Giurgiu, A. 2015: A Late Holocene environmental history of a bat guano deposit from Romania: an isotopic and pollen study. *Quaternary Science Reviews*, **127**: 141-154; <http://dx.doi.org/10.1016/j.quascirev.2015.05.022>
41. **Onac, B.P.**, Hutchison, S.M., Geanta, A., Forray, F.L., Wynn, J.G., Giurgiu, A.C., Coroiu, I. 2015: A 2500-year Late Holocene multi-proxy record of vegetation and hydrologic changes from a cave guano-clay sequence in SW Romania. *Quaternary Research*, **83**: 437-448; <http://dx.doi.org/10.1016/j.ypres.2015.01.007>
42. Lascu, I., Wohlfarth, B., **Onac, B.P.**, Björck, S. 2015: A Late Glacial palaeolake record from an up-dammed river valley in northern Transylvania, Romania. *Quaternary International*, **388**: 87-96; doi: <http://dx.doi.org/10.1016/j.quaint.2014.11.041>
43. Dumitru, O.-A., **Onac, B.P.**, Fornós, J.J., Cosma, C. 2015: Radon concentration and effective dose assessment in Coves de Campanet (Mallorca Island, Spain). *Journal of Radioanalytical and Nuclear Chemistry*, **303**: 885-890; doi: 10.1007/s10967-014-3511-5
44. Feurdean, A., Persoiu, A., Tantau, I., Stevens, T.S., Magyari, E.K., **Onac, B.P.**, Markovič, S., Andrić, M., and workshop participants and data contributors, 2014: Climate variability and associated vegetation response throughout Central and Eastern Europe (CEE) between 60 and 8 ka. *Quaternary Science Reviews*, **106**: 206-224; doi 10.1016/j.quascirev.2014.06.003
45. Dragusin, V., Staubwasser, M., Hoffmann, D.L., Ersek, V., **Onac, B.P.**, Veres, D. 2014: Constraining Holocene hydrological changes in the Carpathian-Balkan region using speleothem  $\delta^{18}\text{O}$  and pollen-based temperature reconstructions. *Climate of the Past*, **10**: 1363-1380; doi: 10.5194/cpd-10-381-2014
46. **Onac, B.P.**, Fornós, J.J., Merino, A., Ginés, J., Diehl, J. 2014: Linking mineral deposits to speleogenetic processes in Cova des Pas de Vallgornera (Mallorca, Spain). *International Journal of Speleology* **43** (2): 143-157.
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52. **Onac, B.P.**, Effenberger, H.S., Wynn, J.G., Povara, I. 2013: Rapidcreekite in the sulfuric acid weathering environment of Diana Cave, Romania. *American Mineralogist* **98**: 1302-1309; <http://dx.doi.org/10.2138/am.2013.4452>
53. Puscas, C.M., **Onac, B.P.\***, Effenberger, H.S., Povara, I. 2013: Tamarugite-bearing paragenesis formed by sulphate acid alteration in Diana Cave, Romania. *European Journal of Mineralogy*, **25**: 479-486; doi: 10.1127/0935-1221/2013/0025-2294.
54. Gómez-Puyol, L., Gelaber, B., Fornós, J.J., Prado-Pascual, J.E., Rosselló, V.M., Segura, F.S., **Onac, B.P.** 2013: Structural control on the presence and character of calas: Observations from Balearic Islands limestone rock coast macroforms. *Geomorphology* **194**: 1-15; doi: <http://dx.doi.org/10.1016/j.geomorph.2013.03.012>
55. Ponta, G., Povara, I., Isverceanu, E.G., **Onac, B.P.**, Marin, C., Tudorache, A. 2013: Geology and dynamics of underground waters in Cerna Valley/Baile Herculane (Romania). *Carbonates and Evaporites*, **28**: 31-39.
56. Zak, K., Orvosova, M., Filippi, M., Vlcek, L., **Onac, B.P.**, Persoiu, A., Rohovec, J., Svetlik, I. 2013: Cryogenic cave pearls in the periglacial zone of ice caves. *Journal of Sedimentary Research*, **83**: 207-220; doi: <http://dx.doi.org/10.2110.jar.2013.16>
57. Veres, D., Lane, C.S., Timar-Gabor, A., Hambach, U., Constantin, D., Szakács, A., Fülling, A., **Onac, B.P.** 2013: The Campanian Ignimbrite/Y5 tephra layer - A regional stratigraphic marker for Isotope Stage 3 deposits in the Lower Danube region, Romania. *Quaternary International*, **293**: 22-33; <http://dx.doi.org/10.1016/j.quaint.2012.02.042>
58. Tuccimei, P., **Onac, B.P.**, Dorale, J.A., Ginés, J., Fornós, J.J., Ginés, A., Spada, G., Ruggieri, G., Mucedda, M. 2012: Decoding last interglacial sea-level variations in the Western Mediterranean using speleothem encrustations from coastal caves in Mallorca and Sardinia: A field data - model comparison. *Quaternary International*, **262**: 56-64.
59. Rimbu, N., **Onac, B.P.**, Racovita, G. 2012: Large-scale climate anomaly patterns associated to temperature variability inside Scarisoara Ice Cave. *International Journal of Climatology* **32**: 1495-1502; doi: 10.1002/joc.2369.
60. **Onac, B.P.**, Wynn, J.G., Sumrall, J. 2011: Tracing the sources of cave sulfates: a unique case from Cerna Valley, Romania. *Chemical Geology* **288**: 105-114; doi: 10.1016/j.chemgeo.2011.07.006
61. **Onac, B.P.**



83. **Onac, B.P.**, Ettinger, K., Kearns, J., Balasz, I.I. 2005: A modern, guano-related occurrence of foggite,  $\text{CaAl}(\text{PO}_4)(\text{OH})_2(\text{H}_2\text{O})$  and churchite-(Y),  $\text{YPO}_4(2\text{H}_2\text{O})$  in Cioclovina Cave, Romania. *Mineralogy and Petrology*, **85**: 291-302.
84. T"ma', T., **Onac, B. P.**, Bojar, A.-N. 2005. Lateglacial-Middle Holocene stable isotope records in two coeval stalagmites from the Bihor Mountains, NW Romania. *Geological Quarterly*, **49** (2): 185-194.
85. Holmlund, P., **Onac, B.P.**, Hansson, M., Holmgren, K., Mörth, M., Nyman, M., Per'oiu, A. 2005: Assessing the palaeoclimate potential of cave glaciers: the example of the Sc"ri'oara Ice Cave (Romania). *Geografiska Annaler*, **87A**: 193-201.
86. **Onac, B.P.**, White, W.B. 2003: First reported sedimentary occurrence of berlinite ( $\text{AlPO}_4$ )

1. Ghergari, L., **Onac, B.P.** 1993: Crisite - a new mineral species found in the Bolhac Cave (Padurea Craiului Mountains, Romania). *Bull. Soc. Géographique de Liège*, **29**: 97-104.
2. **Onac, B.P.**,

22. Zak, K., **Onac, B.P.**, Hercman, H. 2006: Unusual types of secondary cave calcite from the Scarisoara Ice Cave, Bihor Mts., Romania. In *Proc. Conf. "Research, exploitation, and protection of caves 5"* (Ed. Bella, P.), Slovak Cave Administration and Knizné Centrum, Zilina, Slovakia, 118-122.
23. Häuselmann, P., **Onac, B.P.** 2006: Pestera Humpleu. Nouvelle topographie d'une des plus importantes cavités roumaines. *Stalactites*, **56** (1): 43-47.
24. **Onac, B.P.**, Fornos, J.J., Gines, J., Gines, A., Tuccimei, P., Peate, D.W., Bjorck, S. 2006: Sea-level position at ~80 ka based on speleothems from Mallorca. In *Archives of climate change in karst* (Onac et al., Eds.), Karst Waters Institute Spec. Publ. **10**, 189-191.
25. Menichetti M., Chirienco M.I., **Onac B.P.**, Bottrell S. 2008: Depositi di gesso nelle grotte del Monte Cucco e della Gola di Frasassi - Considerazioni sulla speleogenesi. *Memorie dell'Istituto Italiano di Speleologia*, s. II, **XXI**: 484-501.
26. **Onac, B.P.**, Sumrall, J., Tamas, T., Cizmas, C., Darmiceanu, V., Povara, I., Nicolita, L. 2009: Mineralogical and stable isotope investigations of minerals from caves on Cerna Valley (Romania). *Proc. 15th Int. Congr. Speleol., Kerrville, Texas*, **1**: 318-323.
27. Merino, A., Fornos, J.J., **Onac, B.P.** 2009: Preliminary data on mineralogical aspects of cave rims and vents in Cova des Pas de Vallgornera, Mallorca. *Proc. 15th Int. Congr. Speleol., Kerrville, Texas*, **1**: 307-311.
28. Tuccimei, P., Soligno, M., Fornos, J.J., Gines, A., Gines, J., **Onac, B.P.**, Villa, I.M. 2009: Precipitation of phreatic overgrowths at the water table of meteoric-marine mixing zones in coastal cave systems: a useful tool in sea level change reconstruction. *Proc. 15th Int. Congr. Speleol., Kerrville, Texas*, **1**: 554-560.
29. **Onac, B.P.**, Tamas, T. 2010: Cave minerals of the west-central Romania. *Acta Mineralogica-Petrographica*, **22**: 1-22.
30. Giurgiu, A.M., Onac, B.P., T"ma#



*resources, and management of hypogene karst.* Carlsbad, NM, April 11-14, p. 105-113.

36. Mitrofan, H., Marin, C., Povara, I., **Onac, B.P.** 2016: Hercules and Diana hypogene caves (Herculane Spa, Romania): Dissimilar chemical evolutions documented by their present-day thermal water discharges. Proceedings of the Conference *Deep Karst 2016: Origins, resources, and management of hypogene karst.* Carlsbad, NM, April 11-14, p. 145-150.
37. Dumitru, O.A., **Onac, B.P.**,

- bassin de Transylvanie). In *The Oligocene from the Transylvanian Basin* (Eds. Petrescu et al.), 141-148.
8. **Onac, B.P.**, Todoran, V., Onac, L. 1989: Review of the karst on the oligocene formations from the Somes Plateau-Romania. In *The Oligocene from the Transylvanian Basin* (Eds. Petrescu et al.), 503-512.
  9. Cocean, P., **Onac, B.P.** 1989: Le relief développé sur les calcaires cristallines de la partie sud-est du massif de Gilau-Muntele Mare. *Studia UBB Geologia-Geographia*, **XXXIV (1)**, 11-20.
  10. **Onac, B.P.** 1991: New data on some gypsum speleothems in the caves Vintului (Padurea Craiului Mountains) and Rastoci (Somes Plateau). *Trav. Inst. Spéol. "Emile Racovitza"*, **XXX**, 189-193.
  11. **Onac, B.P.**, Popescu, V. 1991: Relations between the overall and local tectonic pattern of the 'uncuiu' deposit and the paleokarst at its bottom. *Trav. Inst. Spéol. "Emile Racovitza"*, **XXX**, 185-187.
  12. **Onac, B.P.** 1991: Contribution to the knowledge of the north Norway karst. *Studia Univ. Babeş-Bolyai, Geographia*, **XXXVI (2)**, 35-42.
  13. **Onac, B.P.**, Farcas, T. 1992: Le moonmilk des grottes de Trollkjerka et de Reshellarn (Lavangsmarka, Nordland, Norvège) *Trav. Inst. Spéol. "Emile Racovitza"*, **XXXI**, 133-138.
  14. **Onac, B.P.**, Racovita, G. 1992: Recherches climatologiques dans Pestera Vintului (Monts Padurea Craiului, Roumanie). *Theoretical and Applied Karstology*, **5**, 167-192.
  15. **Onac, B.P.** 1992: Mineralogy of the Apuseni Mountains caves *Theoretical and Applied Karstology*, **5**, 193-201.
  16. **Onac, B.P.**, Bengeanu, M. 1992: Phosphate minerals in few caves from Padurea Craiului mountains (Romania) (Preliminary note). *Nymphaea*, **XXII**



43. **Onac, B.P.**, Forti, P. 2011: State of the art and challenges in cave minerals studies. *Studia UBB Geologia*, **56 (1)**: 33-42.
44. Hillebrand-Voiculescu, A., Rusu, A., Itcus, C., Persoiu, A., Brad, T., Pascu, M.-D., Ardelean, I., **Onac, B.P.**, Purcarea, C. 2013: Bacterial 16S-RNA clone library from recent ice stalagmites of Scarisoara Ice Cave. *Romanian Journal of Biochemistry*, **50 (2)**: 109-118.

- Racovi! ", G. 1999: *A #ti sau a nu #ti. Adev"rurile vie\$ii lui Emil Racovi\$*". Editura Academiei Române, Bucure 'ti, 560 pp. (inclusiv 125 pp. ilustratie) + 1 pl. In *Studia UBB Geologia XLVI*