

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
3. **Onac, B.P.** 2019: *Minerals in caves*. In: *Encyclopedia of Caves* (3rd 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* (3rd 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 (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*