

## Mihai N. Ducea

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### **1. Profil Stiintific**

**Data si locul nașterii: Sibiu, 15 Mai 1966**

#### **STUDII**

- Liceul Gheorghe Lazar, Sibiu, 1981-1985
- Universitatea București, Diploma de Inginer Geolog, 1986-1991
  - Duke University, M.S. (masterat) in Geologie 1992-1993
- California Institute of Technology, M.S. (masterat) in Geologie 1993-1995
- California Institute of Technology, Ph.D. (doctorat) in Geologie 1995-1998

#### **Cariera Universitara**

- Cercetător postdoctoral, Florida International University 1999-2001
- Profesor Asistent (tenure track), University of Arizona 2001-2004
  - Profesor Asociat (tenured), University of Arizona 2004-2009
    - Profesor, University of Arizona, 2010-prezent
    - Cercetător, Universitatea București 2011-2021
  - Profesor Universitar, Universitatea București, 2021-prezent
    - Cercetător Asociat, Geoecomar 2018-2021

## Asociații și societăți profesionale

Geological Society of America, (Fellow)  
 American Geophysical Union, membru  
 European Geosciences Union, membru  
 Mineralogical Society of America, membru  
 Societatea Geologica a României, membru

## **2. Contribuții Științifice**

### **Cărți și volume speciale**

1. “Tethysides in Central and Eastern Europe”, Celal Sengor, Mihai Ducea, Hans Thybo and Ogus Goguz, Tectonics Special Volume, 2021.
2. DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P. (editors), “Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile”, Geological Society of America Memoir, 212, 843 pp, 2015.
3. Dickinson, W.R., Ducea, M.N., Rosenberg, L., Greene H.G. et al, Tectonic relations and net dextral slip, late Neogene San Gregorio-Hosgri fault zone, coastal California, *GSA Special Paper*, 391, 43 pp, 2005.

### **Capitole in cărți**

1. Currie, C., Ducea, M.N., and DeCelles, P.G., Geodynamic models of Cordilleran orogens: Gravitational instability of magmatic arc roots, in *DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P.* (editors), “Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile”, Geological Society of America Memoir, 212, p. 1-22; 2015.
- 2 . De Celles, P.G., Zandt, G., Beck, SL, Currie, C., Ducea, M.N., Carrapa, B., Reiners, P.W., Quade, J., Kapp, P., and Gehrels, G.E., Cyclical Orogenic Processes in the Central Andes, in *DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P.* (editors), “Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile”, *Geological Society of America Memoir*, 212, p. 459-490, 2015.
3. Murray, K.E., Ducea, M.N., Schoenbohm, L., Mafic lavas on the Puna plateau sample the diverse lithospheric architecture of the long-lived central Andean orogeny, in *DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P.*, (editors), “Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile”, *Geological Society of America Memoir*, 212, p. 139-166, 2015.
4. Ducea, M.N., Otamendi J., Bergantz G.W., Jianu. D., Petrescu, L., Constraints on the origin of the Ordovician Famatinian-Puna Arc, in *DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P.*, (editors), “Geodynamics of a Cordilleran Orogenic System: The Central

Andes of Argentina and Northern Chile”, *Geological Society of America Memoir*, 212, p. 125-139, 2015.

5. Becker, T., Summa, L., and Ducea, M.N., Temporal growth of the Puna plateau and its bearing on the formation 1 of the Metan foreland basin, northwest Argentina, in *DeCelles, P.G., Ducea, M.N., Carrapa B., and Kapp, P.*, (editors), “Geodynamics of a Cordilleran Orogenic System: The Central Andes of Argentina and Northern Chile”, *Geological Society of America Memoir*, 212, p. 407-434, 2015.
6. Wetmore, P.H., Hughes, S., Stremtam, C., Ducea, M.N., The tectonic implications of post-contractional magmatism of the Alisitos arc segment of the Peninsular Ranges, Baja California, Mexico, *Geological Society of America Special Paper*, 211, p. 669-690, 2014.
7. Putirka, K.D., Canchola, J., McNaughton, M., Smith, O., Torrez, G., Paterson, S.R., Ducea, M., Memeti, V., Paterson, S.R., 2014. Day 1: Guadalupe Igneous Complex. Formation of the Sierra Nevada Batholith: Magmatic and Tectonic Processes and Their Tempos: Geological Society of America Field Guide 34, 1-15.
8. Ducea, M.N., Kayzar, T., and Wetmore, P., High Precision  $^{87}\text{Sr}/^{86}\text{Sr}$  Analyses Using Multi-Collector ICP-MS, in Mineralogy and Geodiversity, Anastasiu, N. (editor), *Romanian Academy of Sciences Special Volume*, p. 151-160, 2010.
9. Saleeby, J.B., Ducea, M.N., Busby, C.J., Nadin, E.S., and Wetmore, P.H., Chronology of pluton emplacement and regional deformation in the southern Sierra Nevada Batholith, California: *Geological Society of America*, Special Paper, 438 doi: 10.1130/2008.2438 (14), 397-427, 2008.
10. Ducea, M.N., and Saleeby, J.B., A case of delamination of the deep batholithic crust beneath the Sierra Nevada, California, in Ernst, W.G. and Nelson, C.A. (editors), *Integrated Earth and Environmental Evolution of the Southwestern United States*, p. 273-288, 1998.

### **Lucrari stiintifice „peer review”**

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2. Balica, C., M.N. Ducea G.E. Gehrels, J. Kirk, R.D. Roban, P. Luffi J.B. Chapman, A. Triantafyllou, J. Guo, A.M. Stoica, J. Ruiz, I. Balintoni, L. Profeta, D. Hoffman, L. Petrescu, 2020, A zircon petrochronologic view on granitoids and continental evolution, *Earth and Planetary Science Letters*, 531, paper 11605 <https://doi.org/10.1016/j.epsl.2019.116005>.
4. Balintoni, I., Balica, C., Ducea, M.N., Chen, F., Hann, H.P., Şabliovschi, V., 2009. Late Cambrian–Early Ordovician Gondwanan terranes in the Romanian Carpathians: a zircon U–Pb provenance study. *Gondwana Research* 16, 119-133.

4. Balintoni, I., Balica, C., Ducea, M.N., Hann, H.-P., 2014. Peri-Gondwanan terranes in the Romanian Carpathians: A review of their spatial distribution, origin, provenance, and evolution. *Geoscience Frontiers* 5, 395-411.
5. Balintoni, I., Balica, C., Ducea, M.N., Hann, H.P., Şabliovschi, V., 2010. The anatomy of a Gondwanan terrane: the Neoproterozoic–Ordovician basement of the pre-Alpine Sebeş–Lotru composite terrane (South Carpathians, Romania). *Gondwana Research* 17, 561-572.
6. Balintoni, I., Balica, C., Ducea, M.N., Stremtan, C., 2011. Peri-Amazonian, Avalonian-type and Ganderian-type terranes in the South Carpathians, Romania: the Danubian domain basement. *Gondwana Research* 19, 945-957.
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8. Balintoni, I., Balica, C., Seghedi, A., Ducea, M., 2011. Peri-Amazonian provenance of the Central Dobrogea terrane (Romania) attested by U/Pb detrital zircon age patterns. *Geologica Carpathica* 62, 299-307.
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10. Barbeau Jr, D.L., Ducea, M.N., Gehrels, G.E., Kidder, S., Wetmore, P.H., Saleeby, J.B., 2005. U-Pb detrital-zircon geochronology of northern Salinian basement and cover rocks. *Geological Society of America Bulletin* 117, 466-481.
11. Blondes, M.S., Reiners, P.W., Ducea, M.N., Singer, B.S., Chesley, J., 2008. Temporal–compositional trends over short and long time-scales in basalts of the Big Pine Volcanic Field, California. *Earth and Planetary Science Letters* 269, 140-154.
12. Bowman, E. E., M. N. Ducea, and L. Petrescu 2020, Late Cretaceous age of the Crucea uranium ore deposit, East Carpathians, Romania, *Results in Geochemistry*, 1, Paper 100002.
13. Brady, R.J., Ducea, M.N., Kidder, S.B., Saleeby, J.B., 2006. The distribution of radiogenic heat production as a function of depth in the Sierra Nevada Batholith, California. *Lithos* 86, 229-244.
14. Calkins, J.A., Zandt, G., Girardi, J., Dueker, K., Gehrels, G.E., Ducea, M.N., 2010. Characterization of the crust of the Coast Mountains Batholith, British Columbia, from P to S converted seismic waves and petrologic modeling. *Earth and Planetary Science Letters* 289, 145-155.

15. Cardona, A., Valencia, V.A., Bayona, G., Duque, J., Ducea, M., Gehrels, G., Jaramillo, C., Montes, C., Ojeda, G., Ruiz, J., 2011. Early-subduction-related orogeny in the northern Andes: Turonian to Eocene magmatic and provenance record in the Santa Marta Massif and Rancheria Basin, northern Colombia. *Terra Nova* 23, 26-34.
16. Cecil, M.R., Ducea, M.N., 2011. K–Ca ages of authigenic sediments: examples from Paleozoic glauconite and applications to low-temperature thermochronometry. *International Journal of Earth Sciences* 100, 1783-1790.
17. Cecil R., M., Ducea, M.N., Reiners, P., Gehrels, G., Mulch, A., Allen, C., Campbell, I., 2010. Provenance of Eocene river sediments from the central northern Sierra Nevada and implications for paleotopography. *Tectonics* 29, doi:10.1029/2010TC002717.
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20. Cecil, M.R., Ferrer M.A., N R. Riggs, K Marsaglia, A Kylander-Clark, Ducea, M.N., Stone P., 2018, Early arc development recorded in Permian – Triassic plutons of the northern Mojave Desert region, California, *Geological Society of America Bulletin*.
21. Cecil, M.R., Rotberg, G.L., Ducea, M.N., Saleeby, J.B., Gehrels, G.E., 2012. Magmatic growth and batholithic root development in the northern Sierra Nevada, California. *Geosphere* 8, 592-606.
22. Chaharlang, R., M. N. Ducea, and J. Ghalamghash, 2020, Geochemical evidence for quantifying crustal thickness over time in the Urumieh-Dokhtar magmatic arc (Iran), *Lithos*, 374, 105723.
23. Chapman, A. D., Ducea, M. N., Kidder, S., and Petrescu, L., 2014, Geochemical constraints on the petrogenesis of the Salinian arc, central California: Implications for the origin of intermediate magmas: *Lithos*, v. 200, p. 126-141.
24. Chapman, A.D., Ducea, M.N., McQuarrie, N., Coble, M., Petrescu, L., Hoffman, D., 2015. Constraints on plateau architecture and assembly from deep crustal xenoliths, northern Altiplano (SE Peru). *Geological Society of America Bulletin* 127, 1777-1797.
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geochronologic constraints on the origin of the Nacimiento block, central California Coast Ranges. *Geosphere* 12, 533-557.

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28. Chapman, A.D., Saleeby, J.B., Wood, D.J., Piasecki, A., Kidder, S., Ducea, M.N., Farley, K.A., 2012. Late Cretaceous gravitational collapse of the southern Sierra Nevada batholith, California. *Geosphere* 8, 314-341.
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173. Zhang, L.-Y., Ducea, M.N., Ding, L., Pullen, A., Kapp, P., Hoffman, D., 2014. Southern Tibetan Oligocene–Miocene adakites: A record of Indian slab tearing. *Lithos* 210, 209-223.
174. Zhang, J.-B., Liu, Y.-S., Ducea, M.N., Xu, R., 2020, Archean, highly unradiogenic lead in shallow cratonic mantle: *Geology*, <https://doi.org/10.1130/G47064.1>.
175. Zhang, L. Y., W. M. Fan, L. Ding, M. N. Ducea, A. Pullen, J. X. Li, Y. L. Sun, Y. H. Yue, F. L. Cai, and C. Wang, 2020, Quaternary volcanism in Myanmar: A record of Indian slab tearing in a transition zone from oceanic to continental subduction, *Geochemistry, Geophysics, Geosystems*, 21(8), e2020GC009091.

### **Participări importante la manifestări profesionale**

Prelegeri invitate (2000-2021)

1. Stanford University
2. USGS Menlo Park
3. USGS Denver
4. Chevron. San Francisco
5. ExxonMobil., Houston
6. Univ Michigan
7. Harvard
8. Rochester U.
9. Caltech
10. Arizona State
11. Univ New Mexico
12. New Mexico State
13. UC LA
14. UC San Diego
15. UC Santa Cruz
16. Cal State Northridge

17. Cal State Fullerton
18. University of Southern California
19. Colorado State
20. University of Colorado
21. University of Wyoming
22. Idaho State University
23. University of Leicester
24. Boston University
25. University of Illinois (Urbana Champaign)
26. UC Berkeley
27. University of Santiago, Chile
28. University of Buenos Aires
29. University of Mendoza
30. Salta University
31. UC Santa Barbara
32. Peking University
33. China Univ Geosciences, Beijing
34. China Univ Geosciences, Wuhan
35. University of Chengdu
36. Chengdu Geological Survey
37. Chinese Academy of Sciences Beijing
38. University of Liege
39. University of Bruxelles
40. Istanbul Technical University
41. University of Oslo
42. Cambridge University
43. Durham University, UK
44. University of Budapest
45. University of Porto
46. Florida International University
47. University of Florida
48. Northern Arizona University
49. University of Washington, Seattle
50. Oregon State University

- 51. Indiana University
- 52. University of Nevada, LV
- 53. UNAM Mexico City
- 54. University of Lima, Peru
- 55. UNAM, Taxco, Mexico
- 56. Free University, Amsterdam
- 57. University of Texas, Austin
- 58. Tajik University Dushanbe
- 59. Univ Paris VI
- 60. University of Concepcion, Chile
- 61. University of Rio Cuarto, Argentina
- 62. University of San Juan, Argentina
- 63. Mars Corporation, Kentucky

**Prezentări „keynote” sau invitate la conferințe**

- 1. GSA Fall Meeting, Keynote speaker Phoenix 2019
- 2. GSA Fall Meeting Invited speaker, Remote, 2020
- 3. GSA Fall Meeting, Invited Speaker, Indianapolis 2018
- 4. Annual Goldschmidt, Invited Speaker Prague 2015
- 5. Annual Goldschmidt Invited Speaker, Davos, 2010
- 6. GSA Penrose, Keynote talk, Valdez, Alaska, 2007
- 7. GSA Backbone of the Americas, Keynote speaker, Mendoza, 2006
- 8. Keynote Speaker at AGU’s Joint Assembly Meeting, Acapulco Mexico, May 2007;
- 9. Invited talk at USGS strategic meeting on Future of Geology, Menlo Park, March 2009;
- 10. Keynote speaker at the 2006 Goldschmidt meeting in Melbourne, Australia, August 2006;
- 11. Annual Goldschmidt Conference, Keynote speaker, August, 2013, Florence
- 12. Keynote Speaker at the 2013 Exterra Workshop, August 2013, Florence
- 13. Keynote Speaker at GSA National Meeting, Charlotte, NC, October, 2012
- 14. Keynote Speaker at AGU’s Joint Assembly Meeting, Acapulco Mexico, May 2007.
- 15. Invited talk at “Ores and Orogenesis” Symposium, Tucson, Arizona, October 2007.

**Activitate editorială**

- Editor șef - Geological Society of America Today (2017-2021)
- Editor șef – Geological Society of America Bulletin (2022-2025)
- Vice-Editor, International Geology Review (2016-2022)
- Editor asociat, Tectonics (2017-2022)

### **3.Varia**

- Membru în comitete departamentale și universitare în SUA (U. Arizona) România (UB și UBB) și China (CUG Wuhan);
- Panelist în National Science Foundation (2012, 2014, 2019);
- Colaborator frecvent al National Association of Geosciences Teachers (mini cursuri și excursii pe teren);
- Inițiator al acțiunii GEOFRAME la NSF;
- Membru al comisiei școlii doctorale la Universitatea din Cluj (2016-prezent)
- Responsabil al Secției de Științele Vieții și Pământului, Institutul de Cercetări al Universității București (2020-prezent)

### **Manuscrisse și propuneri de granturi evaluate**

425 manuscrise evaluate în afară de responsabilitățile editoriale pentru 33 de reviste inclusiv Nature, Tectonics, Journal of Petrology, Geology, JGR, GSA Bulletin, Contributions to Mineralogy and Petrology, etc.). 227 propuneri de granturi evaluate pentru National Science Foundation, ACS-PRF, National Geographic, etc.