

VICTOR I. MOCANU

Curriculum Vitae

Date and place of birth: 02 August 1960, Bucharest, Romania
Address: 78, Basarabia Blvd., Bucharest, Romania
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Studies:

1996 PhD in Geology, University of Bucharest. Promoter: Academician Liviu Constantinescu, former VicePresident, IUGG
 1980-1985 BSc+MSc, University of Bucharest, Faculty of Geology and Geophysics. Degree: "Geophysical Engineer" (Cum Laude)

Work experience:

2009-present Professor of Geophysics, Department of Geophysics, University of Bucharest
 2008-2009 Associate Executive Director, American Geophysical Union, Washington DC
 2007-2008 Professor of Geophysics, Department of Geophysics, University of Bucharest
 1998-2007 Associate Professor, Department of Geophysics, University of Bucharest
 1997-1998 Lecturer, Department of Geophysics, University of Bucharest
 1996-1997 Postdoc (Research Associate), Oregon State University, USA
 1993-1996 Lecturer, Department of Geophysics, University of Bucharest
 1988-1993 Assistant, Department of Geophysics, University of Bucharest
 1988-1994 Director, "Surlari" Geophysical Observatory (Geological Institute of Romania)
 1988-1995 Party Chief, Magnetic prospecting, Eastern and Southern Carpathians (target: rare earth elements, manganese)

Publications:

Publications in ISI journals: Tectonophysics, Earth and Planetary Science Letters, Geology, GS Today, EOS etc.

Duties

- *AGU:* - Supervising Finance Department, Public Information and International relationship of AGU; in charge with the operating committees of: International Participation, Budget and Finances, and Public Information; liaison officer for the following sections: Tectonophysics, Seismology; liaison officer for the following focus groups: Earth and Space Science Informatics, Earth and Planetary Science Information, Natural Hazards, and Study of the Earth's Deep Interior.
- *Academic system:*
 - Teaching subjects: Active and Passive Continental Margins; Tectonophysics; Physics of the Earth; General Geophysics
- *Research system:* - member of the research group of the Bureau of Expertise and Consulting, University of Bucharest - geological interpretation of geological and geophysical data in sedimentary basins of Romania, East and Southeast Asia, and USA, geodynamics of Chile Triple Margin, Pacific Northwest and Haida Gwaii

Management duties

- Dean, Faculty of Geology and Geophysics, University of Bucharest (2009-present)
- Chair, Department of Geophysics, University of Bucharest (2005-2008)
- Member, European Advisory Committee for the American Geophysical Union (2004 – 2006)
- Member, Distinguished Lecturer Committee, American Association of Petroleum Geologists (2006 – present)
- Member, Publication Committee, International Union of Geological Sciences (IUGS) (2002 – 2005)

- Senior Adviser, International Year of Planet Earth (2004 – 2007) – UNESCO and IUGS initiative under UN umbrella
- Secretary, Bucharest Geoscience Forum, Romania (1995 - present)
- Foreign relation officer, University of Bucharest, Faculty of Geology and Geophysics (1990 - 2004)
- Member, Research Committee, University of Bucharest, Faculty of Geology and Geophysics (1996 - 2004)
- Head of the Romanian delegation, 31st International Geological Congress, Rio de Janeiro, Brazil (2000) and the 35th IGC, Capetown, South Africa (2016)
- Chairman and organizer, scientific sessions of various AGU, AOGS, SEG, EAGE and EGS annual meetings

Professional affiliation and responsibilities

- Society of Exploration Geophysicist. Member of the Global Affairs Committee (GAC), member of the Council and member of the Committee for University and Student Programs; Chair of GAC 92016-2017)
- American Association of Petroleum Geologists. Member of the Distinguished Lecturer Committee
- European Association of Geoscientists and Engineers. Member of the Council
- American Geophysical Union
- Romanian Society of Geophysics. President, 2012-president
- Bucharest Geoscience Forum. Secretary, 1996-present
- Expert, Committee of the Ministry of Regional development, Government of Romania (2015-present) (natural hazards)
- Expert, Interministerial Commission of the Government of Romania (Mining Law)

Organizer of science meetings

12 specialized international conferences and workshops organized in Romania, US, Chile, Vietnam, PR China and Thailand.

Participation at international meetings of professional societies

54 participations, 62 talks (7 of them invited – key-note) presented at international meetings on SEG, EAGE, AAPG, AGU, EGS, IUGS and IGCs in 1996, 2000, 2004, 2008, 2012.

Editor

Guest co-editor, four special volumes of Tectonophysics (Elsevier Science) dedicated to Carpathian-Pannonian Basin, Indochina, Vietnam. Editor of three special volumes of Bucharest Geoscience Forum. Member of the Editorial Board, Journal of Geodynamics (2000-present)
Member of the Editorial Board, Episodes (2012-present)

Evaluation and Ranking

Member of the Committee on Geology of the Romanian Agency for Quality Assurance in Higher Education, National Committee for promotions and PhD recognition on University and Research , Member of the Science Board, UNESCO and member of the Scientific Board, ReFiNe (Research on Fracking in Europe – consortium of British universities).

Visiting professor

University of Florida, China University of Geosciences, University of Mining Belgrade.

Private areas of interest

Music (Irish, Jazz, classic), Skiing, Painting

SELECTED PAPERS

- Refereed journals

The use of seismic modeling for the geological interpretation of deep seismic reflection data with low signal-to-noise ratios (2016). *Interpretation*, Volume **5(1)**, pp. T23-T31

Authors: Panea, I., Prisecari, S., Mocanu, V., Micu, M., Paraschivoiu, M.

Crustal structure beneath the Blue Mountains terranes and cratonic North America, eastern Oregon, and Idaho from teleseismic receiver functions (2016). *Journal of Geophysical research: Solid Earth*, Volume **121 (7)**, pp. 5049-5067

Authors: Stanciu, A.C., Russo, R.M., Mocanu, V.I., Bremner, P.M., Hongsrewawat, S., Torpey, M.E., VanDecar, J.C., Foster, D.A., Hole, J.A.

A GPS study of land subsidence in the Petrosani (Romania) coal mining area (2016). *Natural Hazards*, Volume **80 (2)**, pp. 797-810

Authors: Muntean, A., Mocanu, V., Ambrosius, B.A.C.

Effects of seismic data acquisition on the environment: RomSeis Project (2016). *International Journal of Environmental Science and Policy*, Volume 4(3), pp. 44-48

Authors: Dragut, D.A., Schultz, G.S., Mocanu, V.

Retrieval of reflections from ambient noise recorded in the Mizil area, Romania (2014) , Volume *Geophysics* **79 (3)**, pp. Q31-Q42

Authors: Panea, I., Draganov, D., Almagro Vidal, C., Mocanu, V.

Gravity and magnetic modelling in the Vrancea Zone, south-eastern Carpathians: Redefinition of the edge of the East European Craton beneath the south-eastern Carpathians (2013). *Journal of Geodynamics*, Volume 71, pp. 52-64

Authors: A. Bocin, R. Stephenson, L. Matenco, V. Mocanu

Shear-wave splitting within the Southeastern Carpathian Arc, Transylvanian Basin, Romania (2013). *Journal of Geodynamics*, Volume 70, pp.: 61-69

Authors: A.C. Stanciu, R.M. Russo, V.I. Mocanu, L. Munteanu

Plate assembly, tectonic responses, and magmatism in southeast Eurasia (2013). *Journal of Geodynamics*, Volume 69, pp.: 1-4

Authors: N.Q. Cuong ; W. Zuchiewicz, N. Hoang, M.F.J. Flower, V. Mocanu

Tidal Modulation of Continuous Non-Volcanic Seismic Tremor in the Chile Triple Junction Region (2013). G3, DOI: 10.1002/ggge.20091.

Authors: A. Gallego, R.M.Russo, D. Comte, V.Mocanu, R.E.Murdie, J.C.vanDecar

Azimuthal anisotropy in the Chile Ridge subduction region retrieved from ambient noise (2011). *Lithosphere*, Volume 3, pp. 393-400 (2011), doi: 10.1130/L139.1.

Authors: A. Gallego, M.P. Planning, R.M. Russo, D. Comte, V.I. Mocanu, R.E Murdie, J.C. Vandecar

Triggered seismic activity in the Liquiñe-Ofqui fault zone, southern Chile, during the 2007 Aysen seismic swarm. (2011). *Geophysical Journal International*, Volume 184, Issue 3, March 2011, Pp.es 1317-1326, DOI: 10.1111/j.1365-246X.2010.04908.x.

Authors: R.M. Russo, A. Gallego, D. Comte, V.I. Mocanu, R. Murdie, C. Moca, J. VanDecar

Subduction of the Chile Ridge: Upp.er mantle structure and flow (2010). *GSA Today*, September 2010, DOI: 10.1130/GSATG61A.1.

Authors: R.M. Russo, J. vanDecar, D. Comte, V. Mocanu, A. Gallego, R. Murdie

Aysén seismic swarm (January 2007) in southern Chile: analysis using Joint Hypocenter Determination (2010). *Journal of Seismology*, Volume 14, Number 4, October 2010 , pp.. 683-691(9). DOI: 10.1007/s10950-010-9190-y.

Authors: C. Mora, D. Comte, R.M. Russo, A. Gallego, V.I. Mocanu

Seismic noise tomography in the Chile ridge subduction region (2010), Volume 182, Issue 3, pp.es 1478–1492, September 2010, DOI: 10.1111/j.1365-246X.2010.04691.x.

Authors: A. Gallego, R.M. Russo, D. Comte, V. Mocanu, R. Murdie, J. vanDecar

Source-side shear wave splitting and upper mantle flow in the Chile Ridge subduction region (2010), August 2010; v. 38; no. 8; p. 707–710; doi: 10.1130/G30920.1.

Authors: R.M. Russo, A. Gallego, D. Comte, V.I. Mocanu, R. Murdie, J. VanDecar

Source-side shear wave splitting and upper mantle flow in the Romanian Carpathians and surroundings (2009). *Earth and Planetary Science Letters*, **287**, 1-2, 30 pp. 205-216.

Authors: Russo, R.M., Mocanu, V.I.

Architecture of the south-eastern Carpathians nappes and Focsani Basin (Romania) from 2D ray tracing of densely spaced refraction data (2009). *Tectonophysics*, **476**, 3-4, 25 pp. 512-527.

Authors: Bocin, A., Stephenson, R., Mocanu, V., Matenco, L.

Seismic attenuation in the Carpathian bend zone and surroundings (2005). *Earth and Planetary Science Letters*, **237**, Issue 3-4, pp. 695 – 709.

Authors: Russo, R.M., Mocanu, V., Radulian, M., Popa, M. and Bonjer, K-P.

Observation of present-day tectonic motions in the Southeastern Carpathians: Results from the ISES/CRC 461 GPS measurements (2005). *Earth and Planetary Science Letters*, **239**, Issue 3-4, pp. 177 – 184.

Authors: van der Hoeven, A.G.A., Mocanu, V., Spakman, W., Nutto, A., Nuckelt, A., Matenco, L., Munteanu, L., Marcu, C. And Ambrosius, B.A.C.

Crustal constraints on the origin of mantle seismicity in the Vrancea Zone, Romania: the case for active continental lithospheric delamination (2005). *Tectonophysics*, **410**, 1-4, pp. 311 – 324. Authors: Knapp., J.H., Knapp., C.C., Raileanu, V., Matenco, L., Mocanu, V. and Dinu, C.

Near-vertical seismic reflection image using a novel acquisition technique across the Vrancea Zone and Focsani Basin , south-eastern Carpathians (Romania) (2005), *Tectonophysics*, **410**, 1-4, pp. 293 – 310.

Authors: Panea, I., Stephenson, R., Knapp., C., Mocanu, V., Drijkoningen, G., Matenco, L., Knapp., J. and Prodehl, C.

2.5D seismic velocity modelling in the south-eastern Romanian Carpathians orogen and its foreland (2005). *Tectonophysics*, **410**, 1-4, pp. 273 – 292.

Authors: Bocin, A., Stephenson, R., Tryggvason, A., Panea, I., Mocanu, V., Hauser, F., and Matenco, L.

The evolution of the Carpathian-Pannonian system. Interaction between neotectonics, deep structure, polyphase orogeny and sedimentary basins in a source to sink natural laboratory (2005). *Tectonophysics*, **410**, 1-4, pp. 1-14.

Authors: Cloetingh, S., Matenco, L., Bada, G., Dinu, C. and Mocanu, V.

Asthenosphere–lithosphere dynamic responses to Tethyan plate collisions (IGCP-430) (2004). *Tectonophysics*, **393**, 1-4, pp. 1-7.

Authors: M.F.J Flower, C.T. Chi, N.T. Yem and V.I. Mocanu

GPS Probes the Kinematics of the Vrancea Seismogenic Zone (2004). *Eos Trans. AGU*, 85(19), 185, 10.1029/2004EO190001.

Authors: A. van der Hoeven, Gü. Schmitt, G. Dinter, V. Mocanu, W. Spakman

Geodynamics, tomographic images and seismicity of the Vrancea region (SE-Carpathians, Romania) (2003). In: S. Cloetingh, F. Horvath, G. Bada and A. Lankreijer (Editors), *Neotectonics and surface processes: the Pannonian Basin and Alpine/Carpathian System*. EGU Special Publication, 3, pp. 105-120. Authors: Mocanu, V.

Detailed look at the final stage of plate break-off is target of study in Romania (1998). *EOS*, **79**, 48, pp. 589-594.

Authors: Wenzel, F., Achauer, U., Enescu, D., Kissling, E., Russo, R., Mocanu, V., Mussachio, G.,

Variscan vs. Alpine tectonothermal evolution of the Southern Carpathian orogen: constraints from ⁴⁰Ar/³⁹Ar ages (1998). *Tectonophysics* **290**, pp. 111 – 135.

Authors: Dallmeyer, R.D., Neubauer, F., Fritz, H. and Mocanu, V.

Deep lithospheric structure of the Eastern Carpathians: density modelling. *Contributions to Geophysics and Geodesy* (1998), **28/2**, 95 – 100. Authors: Bielik, M. and Mocanu, V.

Continental collision in the Romanian Carpathians: incorporation of geophysical data. *Przeład Geologiczny*, **45**, 10/2, pp. 1092-1093.

Authors: Mocanu, V. and Lillie, R.J.

Continental collision in the Romanian Carpathians: incorporation of geophysical data. *Przegląd Geologiczny*, **45**, 10/2, pp. 1092-1093.

Authors: Mocanu, V. and Lillie, R.J.

Investigations of the rheology of the lithosphere in the PanCarDi system (1997). *Przegląd Geologiczny*, **45**, 10/2, pp. 1086-1087. Authors: Lankreijer, A., Bielik, M. and Mocanu, V.

Preliminary case for PANCARDI mantle extrusion (1997). *Przegląd Geologiczny*, **45**, 10/2, pp. 1073-1074. Authors: Flower, M.F.J., Mocanu, V. and Russo, R.

Investigations of the rheology of the lithosphere in the PanCarDi system (1997). *Przegląd Geologiczny*, **45**, 10/2, pp. 1086-1087. Authors: Lankreijer, A., Bielik, M. and Mocanu, V.

Tectonics of the Alpine-Pannonian-Carpathian region: introduction (1997). *Tectonophysics* **272**, pp. 269 – 290. Authors: Neubauer, F., Cloeting, S.A.P.L., Dinu, C. and Mocanu, V.

Lateral variation in lithospheric strength in the Romanian Carpathians: constraints on basin evolution (1997). *Tectonophysics* **272**, pp. 269 – 290.

Authors: Lankreijer, A., Mocanu, V.I. and Cloetingh, S.A.P.L.

Continental collision and the ending phases of subduction in the Eastern and Southern Carpathians: incorporation of geophysical data from Romania (1996). *Mitteilungen der Gesellschaft der Geologie und Bergbaustudenten in Österreich*, Band **41**, Wien, pp. 119.

Authors: Bielik, M., Mocanu, V., A. Adam, A., Dinu, C. and Lillie, R.J.

A preliminary study of gravity field in the Eastern and Southern Carpathians and the narrow continental rifts in the Pannonian basin (1996). *Mitteilungen der Gesellschaft der Geologie und Bergbaustudenten in Österreich*, Band **41**, Wien, pp. 102.

Authors: Bielik, M., Mocanu, V., Adam, A., Dinu, C. and Lillie, R.J.

Hydrocarbon resources of Romania - an overview. In G. Wessely, W. Leibl (editors) (1996), *Oil and Gas in Alpidic Thrustbelts and Basin of Central and Eastern Europe*, Published by The Geological Society, London for European Association of Geoscientists and Engineers, Special Publication No. 5, pp. 23 – 27. Authors: Dinu, C., Morariu, D.C. and Mocanu, V.

Seismogeological features of the crust in Romania. In G. Wessely, W. Leibl (editors) (1996), *Oil and Gas in Alpidic Thrustbelts and Basin of Central and Eastern Europe*, Published by The Geological Society, London for European Association of Geoscientists and Engineers, Special Publication No. 5, pp. 289 – 299. Authors: Mocanu, V., Dinu, C., Radulescu, Fl., Diaconescu, M., Diaconescu, Camelia and Pompilian, A.

Study of the recent crustal movements in Romania: an overview (1996). *J Geodynamics*, **22**, 1/2, pp. 33-50.

Authors: Radulescu, Fl., Mocanu, V., Nacu, V. and Diaconescu, Camelia

⁴⁰Ar/³⁹Ar mineral age controls for the pre-alpine and alpine evolution of the napp.e complexes in the Southern Carpathians (1994). *Romanian Journal of Tectonics and Regional Geophysics*, **75**, pp. 77 - 86. Authors: Dallmeyer, R.D., Neubauer, F., Mocanu, V. and Fritz, H.

Geophysical features of the Romanian territory (1994). *Romanian Journal of Tectonics and Regional Geophysics*, **75**, pp. 17 - 36.

Authors: Mocanu, V. and Radulescu, Fl.

Recent crustal movements in the Vrancea seismic region (Romania) (1992). *Proceedings of the XXII General Assembly of the European Seismological Commission*, pp. 349 - 352.

Authors: Radulescu, Fl., Nacu, V., Bitter, M., Dinu, C. and Mocanu, V.

Lithospheric structure of Romania and recent crustal movements (1991). *Geodynamic connections. Rev. Roum. Geol., Geogr., Geophys., Series Geophys.*, **35**, pp. 1 - 11.

Authors: Mocanu, V., Radulescu, Fl. and Dinu, C.

Geotectonic setting and the particular structural features of the Beius basin on the basis of geological and geophysical data synthesis. *Rev. Roum. Geol., Geogr., Geophys., Series Geophys.*, **35**, pp. 77 - 88.

Authors: Dinu, C., Calota, C., Mocanu, V. and Ciulavu, D.

Horizontal gradients of recent crustal movements of Romania (1988). *Rev. Roum. Geol., Geogr., Geophys., Series Geophys.*, **32**, 1988

Authors: Lazarescu, V., Radulescu, Fl., and Mocanu, V.

Deep structure of Ditrau Alkaline Massif by Gravity and Magnetics (1988). *Rev. Roum. Geol., Geogr., Geophys., Series Geophys.*, **32**, 1988, Authors: Postolache, C., Postolache, Adriana and Mocanu, V.

- Abstracts

112 abstracts at various international meetings

- Books and Special Volumes

Sistemul de Determinare a Pozitiei Utilizand sateliti (Global Positioning Systems Usig Satelites – in Romanian). Editura Universitatii din Bucuresti (University of Bucharest Publishing House), 2013, 205 pp.

Authors: Paunescu, C., Mocanu, V., Dimitriu, S.

Geodynamics of Vietnam. *Journal of Geodynamics*, Vol. 69, 186 pp., September 2013

Editors: Cuong Nguyen Quoc, Witold Zukiewicz, Hoang Nguyen, Martin Flower, Cung Thung Chi and Victor Mocanu

Geochronology (Geocronologie – in Romanian). Editura Curtea Veche Bucuresti (Curtea Veche Publishing House, Bucharest), 2007, 98 pp.

Author: Mocanu, V.

Sistemul Global de Pozitionare G.P.S. (Global Positioning Systems G.P.S. – in Romanian). Editura Universitatii din Bucuresti (University of Bucharest Publishing House), 2005, 119 pp.

Authors: Paunescu, C., Mocanu, V., Dimitriu, S.

The Carpathian-Pannonian Basin System: Natural Laboratory for Coupled Lithospheric-Surface Processes. Volume 410, Issue 3-4, *Tectonophysics*, 9 December 2005

Guest Editors: Cloetingh, S., Matenco, L., Bada, G., Dinu, C. and Mocanu, V.

Asthenosphere–lithosphere dynamic responses to Tethyan plate collisions (IGCP-430) Volume 393, Issues 1-4, *Tectonophysics*, 18 November 2004

Editors: M.F.J Flower, C.T. Chi, N.T. Yem and V.I. Mocanu

Geology, Tectonics and Hydrocarbon Potential of the Romanian Moesian Platform. Bucharest Geoscience Forum Special Volume no. 3 (2004), Bucharest, 87 pp.

Editors: Corneliu Dinu, Victor Mocanu

Geology and Tectonics of the Romanian Black Sea Shelf and its Hydrocarbon Potential. Bucharest Geoscience Forum Special Volume no. 2 (2002), Bucharest, 114 pp.

Editors: Corneliu Dinu, Victor Mocanu

Geological Structure and Hydrocarbon Potential of the Romanian Areas, Bucharest Geoscience Forum Special Volume No. 1 (1998), Bucharest, 121 pp.

Editors: Corneliu Dinu and Victor Mocanu

Tectonics of the Alpine - Carpathian - Pannonian region, II. Special volume 272, Nos. 2 - 4, *Tectonophysics*, 10 May 1997.

Editors: F. Neubauer, S. Cloetingh, C. Dinu, V. Mocanu

Study of recent crustal movements (1991), Institute of Atomic Physics, Bucharest, 112 pp.

Authors: Fl. Radulescu, V. Nacu, V. Mocanu