CURRICULUM VITAE

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Assistant Professor

Personal information

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Education

December 2001 - March 2005 Ph.D. in Planetary Sciences at the International Research School of Planetary Sciences (IRSPS), Universita' d'Annunzio, Chieti-Pescara (Italy);
Thesis title: *Microbial biosignatures from hydrothermal environments and the search for life on other planets*. Advisors: Prof. Gian Gabriele Ori, Dr. Lucia Marinangeli and Dr. Goro Komatsu.

October 1992 - June 2000 B.Sc. in Geology with a specialization in Micropaleontology at University of Belgrade (Serbia). *Because the B.Sc. program in Geology Department of UB lasts 5 ½ years, after implementation of Bologna Process my B.Sc. degree was recognized as M.S.
Thesis title*: Biostratigraphy: Foraminifera and Ostracoda from Vcr71 borehole, Kolubara Basin (translated title).* Advisor: Prof. S.Mitrovic and Correlator: Prof. Lj.Rundic.

Professional Experience

September 2013 – present Assistant Professor at Department of Earth and Environmental Sciences, Rutgers University – Newark.
September 2013 – present Visiting Scientist at Geophysical Laboratory, Carnegie Institution of Washington.
March 2010 – September 2013 Research Scientist at Geophysical Laboratory, Carnegie Institution of Washington.
September 2007 – March 2010 Postdoctoral Fellowship at Geophysical Laboratory, Carnegie Institution of Washington; advisor Dr Andrew Steele within research area of Geomicrobiology and Astrobiology.
May 2005 – August 2007 Postdoctoral Fellowship at Geology Department, Indiana University; advisor Prof Abhijit Basu within research area of Planetary Geology and Astrobiology.
June 2001 – June 2002 Geologist-researcher at Geomagnetic Institute of Yugoslavia, Department of Paleomagnetism, Grocka, Belgrade (Serbia). Research activities dealt with tectonics of Mesozoic/Cenozoic boundary in area of Fruska Gora Mountain, Vojvodina, Serbia, involving field and laboratory work with interpretation of data.

Research Grants, Awards and Fellowships

- **PI:** NASA Astrobiology Science and Technology for Exploring Planets (ASTEP), "Preservation of life signatures in cached evaporates?" $1,299,000; 2012-2015
- **PI:** Sloan Grant to CIW "Deep Carbon Observatory" "Deep Earth Carbon Interface with Biosphere; Campi Flegrei Deep Drilling Project, ICDP" $60,000; 2012
- **Co-I:** NAI Director's Discretionary Fund 2010 PI Marilyn L. Fogel "Multiple Sulfur Isotope Analysis of Organic Materials of Astrobiological Interests" $38,000; 2011
- **Collaborator:** NASA Astrobiology Institute, PI G. Cody: "Astrobiological Pathways: From the interstellar medium, through planetary systems, to the emergence and detection of life"
- **Collaborator:** NASA Astrobiology Science and Technology for Exploring Planets (ASTEP), PI A. Steele: "Arctic Mars Analogue Svalbard Expedition (AMASE) Sample Return"; 3 years, involvement 10%: 2008-2012

- **Postdoctoral fellow:** Carnegie Institution of Washington and NASA Astrobiology Institute: 2007-2009
- **Co-I:** Research grant of Faculty Research Support Program, Indiana University, PI J. Schieber: "Characterization of hydrothermal deposits and microbial biomarkers from a submarine plateau north of Panarea Island, Italy"; $20000: 2006-2007
- **Postdoctoral fellow:** Indiana University: 2005-2007
- **PhD grant:** Italian Ministry of Education: 2002 to 2005

Professional Service

Reviewer for Peer-reviewed Journals:

- Reviewer for *Geology*
- Reviewer for *Palaeogeography, Palaeoclimatology, Palaeoecology*
- Reviewer for *Planetary and Space Science*
- Reviewer for *Meteoritics and Planetary Science*
- Reviewer for *Sedimentary Geology*
- Reviewer for *Origins of Life and Evolution of the Biosphere*
- Reviewer (internal) for *U.S. Geological Survey, Reston, VA*

Proposal Review Panels

- *Mars Science Laboratory Participating Scientist; NASA* review panel; 2011
- *Astrobiology Science and Technology for Exploring Planets (ASTEP), NASA* review panel; 2011
- *Astrobiology: Exobiology and Evolutionary Biology, NASA* review panel; 2011
- *Astrobiology Science and Technology for Exploring Planets (ASTEP), NASA* review panel; 2010

External Reviewer for Proposal Review Panels

- *Geobiology and low-temperature geochemistry program, National Science Foundation*
- *Sedimentary geology and paleobiology program, National Science Foundation*
- *Moon and Mars Analog Missions Activities, NASA*
- *Astrobiology: Exobiology and Evolutionary Biology, NASA program*
- *Austrian Space Agency*

Committees

- Serving in Library Committee at Geophysical Laboratory/Department of Terrestrial Magnetism, Carnegie Institution of Washington; 2009 and 2010.

Conference and Fieldtrip organization

- Mars Exploration Program Analysis Group, March 3-4, 2009 Rosslyn Virginia
- Postmeeting Fieldtrip leader to Vesuvius and Solfatara crater at International Mars Conference, Ischia, 2004; http://irsps.sci.unich.it/~luciam/ischia/
- Premeeting fieldtrip to the Etna at "Exploring Mars and its Earth analogues" workshop, 2002 http://irsps.sci.unich.it/education/sicilia/fieldtrip.html
- Workshop on "Exploring Mars and its Earth analogues", Cannizzaro, Italy, 2002 http://irsps.sci.unich.it/education/sicilia/
- Geoplanets: Euro summer school of Planetary Geology, Pescara (Italy), 2002.
- http://irsps.sci.unich.it/education/geoplanets/

Other:

- Volunteer as a science judge for the Science Fair at Bishop O'Connell High School, Arlington, VA, February 9, 2008
- Volunteer lecturer at Astrobiology Summer School for high school seniors, organized by Carnegie Institution of Washington Headquarters (J. Edmonds); 2010

Field Experience

2012

May - Mojave Desert, CA
October – Campi Felgrei, Italy
November – Campi Felgrei, Italy

2011

August- Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.

2010

August- Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.
September- Arctic Mars Analog Svalbard Expedition (AMASE); Mono Lake, California

2009

March- White Sands National Monument, New Mexico
August- Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.

2008

August– Arctic Mars Analog Svalbard Expedition (AMASE); Svalbard, Norway.

2007

February – White Sands National Monument, New Mexico; Estancia Basin, New Mexico, Guadalupe National Park, Texas.

2006 to August 2007

Jackson Creek, Bloomington, Indiana, weekly observations of the microbial ecosystem.

2004

August - Vesuvius and Solfatara Volcanoes, Italy.

2002

March - Solfatara Volcano, Italy.
April - Paterno mud volcanoes and Etna volcano, Italy.

Invited Seminars

- March 2012; Department of Geological Sciences, University of Missouri
- February 2012; Geochemistry Seminar, University of Maryland, College Park
- October 2011; Department of Geological Sciences, University of El Paso, Texas: Microbial signatures in Aeolian evaporates of White Sands National Monument (New Mexico) and their astrobiological implications.
- February 2011; Department of Geology and Department of Chemistry, University of Cincinnati, Ohio: Microbial signatures from the evaporitic arid environments of White Sands National Monument, New Mexico and Geomicrobiological methods for life signatures in extreme environments.
- July 2010; Geophysical Laboratory, Carnegie Institution of Washington, Washington, DC: Microbial signatures from the evaporitic arid environments of White Sands National Monument, New Mexico.
- March 2008; USGS, Reston, VA: Biomarkers: preservation in Mars analog environments; example of Chesapeake Bay impact structure.
- February 2008; Smithsonian Museum of Natural History, Washington, DC: Biomarkers: preservation in Mars analog environments.
- April 2007; Department of Geological Sciences, Indiana University, Bloomington, IN: Life's signatures in hydrothermal environments; Terrestrial analogues for Martian habitats.
- February 2007; Geophysical Laboratory, Carnegie Institution of Washington, Washington, DC: Life's signatures in hydrothermal environments; Terrestrial analogues for Martian habitats.
- January 2006; Humboldt University, Natural History Museum, Berlin, Germany: Life's signatures in hydrothermal environments; Terrestrial analogues for Martian habitats.
- May 2006; volunteer in teaching course "Petrology of meteorites" at The 2006 National Science Olympiad, Indiana University, Bloomington.

Languages

- Serbo-Croatian (Native)
- English (Fluent)
- Italian (Fluent)

Publications

PEER-REVIEWED:

Glamoclija M., Fogel M.L., Steele A. Microbial Nitrogen and Sulfur Cycles at the Playa and Playa-lake Deposits of White Sands National Monument, New Mexico. *In preparation for Geomicrobiology Journal (a manuscript available)*

Agee CB, Wilson NV, McCubbin FM, Ziegler K, Polyak VJ, Sharp ZD, Asmerom Y, Nunn MH, Shaheen R, Thiemens MH, Steele A, Fogel ML, Bowden R, Glamoclija M, Zhang Z, Elardo SM. 2013. Unique Meteorite from Early Amazonian Mars: Water-Rich Basaltic Breccia Northwest Africa 7034. Science doi: 10.1126/science.1228858

Stern J., McAdam A., Ten Kate I., Blake D., Morris R., Bowden R., Fogel M.L., **Glamoclija M.**, Steele A., Amundsen H. (2013) Iostopic and geochemical analysis of carbonates by evolved gas techniques: Simulating isotopic measurements for Mars surface operations in Svalbard, Norway. *Icarus.*

Steele, A., Fries M., Kater, L., McCubbin, F.M., Mysen, B., Boctor, N., Fogel, M., Conrad, P, **Glamoclija, M.**, Spencer, M., Morrow, A.L., Hammond M.R., Vicenzi E., Rose T., Siljstrom, S., Zare, R., Herd, C.D.K., Shirey, S.B., Amundsen, H.E.F. and Treiman A.H. A reduced carbon component in Martian basalts. *Science,* doi: /10.1126/science.1227015

Glamoclija M., Fogel M.L., Kish A., Steele A. 2011. Microbial Nitrogen and Sulfur Cycles at the Gypsum Dunes of White Sands National Monument, New Mexico. Geomicrobiology Journal

Glamoclija M., Marinangeli L., Komatsu G. (2010) Harmakhis Vallis Source Region, Mars: Insights into the Geothermal History based on Geological Mapping; Planetary and Space Sciences, 59, 1179-1194.

Steele A., McCubbin F.M., Fries M., **Glamoclija M.,** Kater L., Nekvasil H. (2010) Graphite in an Apollo 17 Impact Melt Breccia. Science (Brevia), 329/5987, p. 51, doi:10.1126/science.1190541.

Dohm J.M., Miyamoto H., Ori G.G., Fairen A.G., Davila A.F., Komatsu G., Mahaney W.C., Williams J.-P., Joye S.B., Di Achille G., Oehler D., Marzo G., Schulze-Makuch D., Acocella V., **Glamoclija M.**, Pondrelli M., Boston P., Allen C.R., Anderson R.C., Baker V.R., Fink W., Frazer A.R., Furfaro R., Gross C.H., Hare T.M., Hart K.M., Ip F., Kelleher B.P., Kim K.J., Maruyama S., McGuire P.C., Netoff D., Parnell J., Wendt L., Wheelock S., Steele A. (2010) An inventory of potentially habitable environments on Mars: Geological and biological perspectives. *GSA special paper: Analogs for Planetary Exploration; in press*

Szynkiewicz A., Pratt L M., **Glamoclija M**., Moore C.H., and Bustos D. (2010) The origin of coarsely crystalline gypsum domes in a saline playa environment at the White Sands National Monument, New Mexico. Journal of Geophysical Research, Earth Surface*,* doi:10.1029/2009JF001592.

Szynkiewicz A., Ewing R., Moore C.H., Pratt L. M., **Glamoclija M.**, Bustos D. (2009) Origin of terrestrial gypsum dunes – implications for Martian gypsum-rich dunes of Olympia Undae. Geomorphology, doi:10.1016/j.geomorph.2009.02.017

Szynkiewicz A., Moore C.H., **Glamoclija M.,** and Pratt L M. (2009) Sulfur isotope signatures in gypsiferous sediments of the Estancia and Tularosa Basins as indicators of sulfate sources, hydrological processes, and microbial activity. Geochimica et Cosmochimica Acta; doi: 10.1016/j.gca.2009.07.009.

Glamoclija M., Steele A., Fries M., Schieber J., Voytek M. and Cockell C.S. (2009) Association of Anatase (TiO_2) and Microbes; Unusual Fossilization Effect or A Potential Biosignature? *In:* Gohn, G.S., Koeberl, C., Miller, K.G., and Reimold, W.U., (eds.): The ICDP- USGS Deep Drilling Project in the Chesapeake Bay Impact Structure: Results from the Eyreville Core Holes: Geological Society of America Special Paper 458; doi:10.1130/2009.2458(42).

Cockell C.S., Gronstal A., Voytek M., Kishtein J., Finster K., Sanford W., **Glamoclija M**., Gohn G., Powars D.S. and Horton W. (2009) Microbiology of Chesapeake Bay Impact Crater: Microbial Abundance and its Relationship to Lithology and Impact Processes *In:* Gohn, G.S., Koeberl, C., Miller, K.G., and Reimold, W.U., (eds.): The ICDP- USGS Deep Drilling Project in the Chesapeake Bay Impact Structure: Results from the Eyreville Core Holes: Geological Society of America Special Paper 458; doi: 10.1130/2009.2458(40).

J.M. Dohm, R.C. Anderson, V.R. Baker, N.G. Barlow, W.V. Boynton, A.G. Davies, A.G. Fairén, J.C. Ferris, **M. Glamoclija**, J. Keller, K. Kerry, L. Marinangeli, H. Miyamoto, G.G. Ori, J.A.P. Rodríguez, D. Schulze-Makuch, R.G. Strom, J. Taylor, M.A. de Pablo Hdez and OTHER GRS TEAM MEMBERS; (2008) Tharsis/Elysium Corridor: A marker for an internally active Mars?; Planetary and Space Science, doi:10.1016/j.pss.2008.01.001.

Glamoclija M. and Basu A. (2007) Comparative Geology of Earth, Mars, and Moon during the First ~1.5Ga of their Evolution; Transactions, Mining, Metallurgical and Geological Institute, v. 103, no. 1&2, pp. 30-82.

Schieber, J., and **Glamoclija, M.** (2007) Microbial Mats Built by Iron Bacteria: A Modern Example from Southern Indiana. In: P. Eriksson et al. (Eds.), An Atlas of microbial mat features preserved within the clastic rock record, pp. 233-244, Elsevier.

Glamoclija M., Schieber J., Szynkiewicz A. (2006) Bacterial Signatures in Iron-Rich Hydrothermal Crusts, Tyrrhenian Sea, Italy, International Journal of Astrobiology, v. 6 /1, pp. 59–87

Ivanov M.A., Korteniemi J., Kostama V. P., Aittola M., Raitala J., **Glamoclija M.**, Marinangeli L., Neukum G., and The HRSC Co-Investigator Team. (2005) Major episodes of the hydrologic history in the region of Hesperia Planum, Mars; JGR-Planets, v. 110, doi:10.1029/2005JE002420

Glamoclija M., Garrel L., Berthon J., and López-García P., (2004) Biosignatures and bacterial diversity in hydrothermal deposits of Solfatara Crater, Italy; Geomicrobiology, v.21/8, pp.529-541.

Glamoclija M., (2003) Life on Mars: hydrothermal sites from the southern Italy like possible analogues, In: Blanco A., Dotto E. and Orofino V. (eds.), Proceedings of V Convegno di Scienze Planetarie, pp. 87-91, Alenia spazio, Lecce.

FIELDTRIP GUIDEBOOKS

Ori G.G., **Glamoclija M**, Marinangeli L. and Pacifici A. (editors), (2004) International Mars conference, Ichia, Field Trip Guidebook:Volcanic districts of Vesuvius and Campi Flegrei (Italy).29 pp.

Ori G.G., **Glamoclija M**, and Rossi A.P. (editors), (2002) Exploring Mars surface and its Earth analogues: Field Trip Guidebook to Mount Etna, Alenia Spazio, 65 pp. http://irsps.sci.unich.it/education/sicilia/sicily_guidebook.pdf

Glamoclija M. (2002) Astrobiological potential of Solfatara as terrestrial analogue for Mars. Exploring Mars and its Eartth analogues. Exploring Mars Surface and its Earth Analogues (Guidebook), 23-29. IRSPS, Pescara.

Glamoclija M. (2002) Mud volcanoes (Salinelle) of Paternò area, Sicily: Astrobiological potential and possible terrestrial analogue for Mars. Exploring Mars and its Earth analogues. Exploring Mars Surface and its Earth Analogues (Guidebook), 29-35. IRSPS, Pescara.

SELECTED ABSTRACTS FROM SCIENTIFIC CONFERENCES

Glamoclija M., Steele A, Fogel M.L. (2011) Microbial Nitrogen and Sulfur Cycles at the Playa and Playa-lake Deposits of White Sands National Monument, New Mexico; AGU Fall Meeting, San Francisco.

Glamoclija M., Steele A, Fogel M.L. (2011) Microbial influences on aeolian sulfates: A case study of a dune field at White Sands National Monument. 42nd LPSC, Abstract #2183.

Glamoclija M., M.L. Fogel, A. Kish and A. Steele (2010) Microbial signatures from the arid environments of White Sands National Monument, New Mexico. Astrobiology Science Conference, Abstract # 5460.

McCubbin F.M., **Glamoclija M.,** Steele A., Smifnof A. (2010) Active igneous and hydrothermal activity during the early-middle Amazonian: Interfaces from the Chassignite and Nakhlite meteorites and implications for astrobiology. Astrobiology Science Conference, Abstract # 5604.

Eigenbrode J. L., L. G. Benning, D. J. Tobler, J.-D. Rodriguez Blanco, M. L. Fogel, M. Callahan, J. Dworkin, **M. Glamoclija**, D. Glavin, L. Kerr, A. Kish, P. Mahaffy, A. McAdam, A. Steele, M. Voytek, H. E. F. Amundsen, and the AMASE 2008/09 teams (2010) Organic biosignatures and habitat features of near-surface glacial ice in Svalbard. Astrobiology Science Conference, Abstract # 5546.

Tobler D.J., Benning L.G., Fogel M.L., **Glamoclija M.**, Kerr L., Steele A., Amundsen H., the 2008 AMASE team and Eigenbrode J.L. (2009) Signatures of Life in Ice (SLIce): An analog study for *in-situ* detection of biosignatures elsewhere. Goldschmidt Conference.

Conrad P.G., Forgel M.L., **Glamoclija M.**, Kerr L., Mogensen C., Eigenbrode J., Mahaffy P.R., Steele A. (2009) Metrics for Habitability Assessment. LPSC XXXX, Abstract #1384.

Schieber J., Zawar Y., and **Glamoclija M.** (2008) Experiments on Silicification of Iron Microbes - A preliminary report. LPSC XXXIX, Abstract #2132.

Glamoclija M., Schieber J., and Reimold W.U. (2007) Microbial signatures from impact-induced hydrothermal settings of the Ries Crater, Germany: A preliminary SEM study. LPSC XXXVIII, Abstract #1989.

Schieber J., **Glamoclija M.**, and Thaisen K. (2007) Experiments on fossilization of iron microbes – a preliminary report. LPSC XXXVIII, Abstract #1626.