



Jamaledin Baniamerian

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EDUCATION

Post-doctoral researcher , Dipartimento di Matematica e Fisica, University of Roma Tre, Italy	Current
PhD in Planetary geophysics , Dipartimento di Matematica e Fisica, University of Roma Tre, Italy Title of thesis: Estimation of Attenuation from GPR Data in Terrestrial and Planetary Investigation	2019-2022
PhD in Geophysics- Electromagnetism , Institute of Geophysics, University of Tehran. Title of thesis: mapping the magnetic basement map by using the multiscale analysis of airborne data.	2011-2016
Master in Geophysics-Magnetic method , Institute of Geophysics, University of Tehran Title of thesis: Combined use of Analytic Signal and Euler Deconvolution on the interpretation of magnetic data	2006-2009
Bachelor's in physics , condensed matter, University of Kurdistan, Sanandaj, Iran	2000-2005

ACADEMIC EXPERIENCES

Assistant Professor, Graduate University of Advanced Technology , Kerman, Iran	2017-2020
Visiting researcher, University of Naples Federico II, Naples, Italy	2016-2017
PhD visiting student, University of Naples Federico II, Naples, Italy	6 months, 2014

Teaching EXPERIENCES

Mathematics in Physics Magnetic and gravity methods in exploration Electromagnetic methods in geophysics Geophysics in tectonic Basic Electromagnetic Theory Geomagnetic	Master level
General Physics Basic Electromagnetic	Bachelor
Geosoft Oasis Montaj software	Workshop

Research Interests

Planetary geoscience
Radar in planetary investigation
Radioglaciology
Rocks electrical properties
geomagnetic field investigation
Airborne geophysics methods
Processing and interpretation of the gravity, magnetic, EM data (ground and airborne)
Modeling and Inversion of potential field data
Implementation of geophysical data in environmental, near surface investigations
Mapping the basement and deep source imaging
2D and 3D inversion of the basement relief

Publication and conferences

Papers

1. Baniamerian J, Lauro SE, Cosciotti B, Mattei E, Pettinelli E. Separation of absorption and scattering loss in scattered medium using Power and Amplitude Spectrum Analysis of Ricker Wavelet. *IEEE Transactions on Geoscience and Remote Sensing*, 2023.
 2. Lauro SE, Pettinelli E, Caprarelli G, Baniamerian J, Mattei E, Cosciotti B, Stillman DE, Primm KM, Soldovieri F, Orosei R. Using MARSIS signal attenuation to assess the presence of South Polar Layered Deposit subglacial brines. *Nature communications*. 2022 Sep 28;13(1):1-0.
 3. Lauro SE, Baniamerian J, Cosciotti B, Mattei E, Pettinelli E. Loss tangent estimation from ground-penetrating radar data using Ricker wavelet centroid-frequency shift analysis. *Geophysics*. 2022 May 1;87(3):H1-2.
 4. Baniamerian J, Liu S, Hu X, Fedi M, Chauhan MS, Abbas MA. Separation of magnetic anomalies into induced and remanent magnetization contributions. *Geophysical Prospecting*. 2020 Aug 6;68(7):2320-42.
 5. Nazeri S, Baniamerian J, Shomali ZH. Comment on "Quick Estimation of the Magnitude and Epicentral Distance Using the P Wave for Earthquakes in Iran" by Reza Heidari. *Bulletin of the Seismological Society of America*. 2021 Jun 1;111(3):1661-2.
 6. Paoletti V, Milano M, Baniamerian J, Fedi M. Magnetic field imaging of salt structures at Nordkapp Basin, Barents Sea. *Geophysical Research Letters*. 2020 Sep 28;47(18): e2020GL089026.
 7. Vatankhah S, Liu S, Renaut RA, Hu X, Baniamerian J. Improving the use of the randomized singular value decomposition for the inversion of gravity and magnetic data. *Geophysics*. 2020 Sep 1;85(5): G93-107.
 8. S. Liu, J. Baniamerian and M. Fedi, "Imaging Methods Versus Inverse Methods: An Option or An Alternative?" in *IEEE Transactions on Geoscience and Remote Sensing*, vol. 58, no. 5, pp. 3484-3494, May 2020, doi: 10.1109/TGRS.2019.2957412
 9. Liu, S., Fedi, M., Hu, X., Baniamerian, J., Wei, B., Zhang, D., Zhu, R, 2018, Extracting induced and remanent magnetizations from magnetic data modeling. *Journal of Geophysical Research: solid earth*, 2018. <https://doi.org/10.1029/2017JB015364>.
 10. Liu, S., Fedi, M., Hu, X., Ou, Y, Baniamerian, J., Liu, Y, 2018, 3D inversion of magnetic data in the simultaneous presence of significant remanent magnetization and self-demagnetization example from Daye iron-ore deposit (central China). *Geophysical Journal International*. <https://doi.org/10.1093/gji/ggy299>.
 11. Baniamerian, J., Liu, S., Mahmoud Ahmed, M. Abbas, 2018, "Improved computation of potential field vertical gradient based on smoothing filters". *Pure And Applied Geophysics*, 2018. <https://doi.org/10.1007/s00024-018-1857-2>.
 12. Baniamerian, Jamaledin, Maurizio Fedi, and Behrooz Oskooi, 2016, "Research Note: Compact Depth from Extreme Points: a tool for fast potential field imaging." *Geophysical Prospecting* 64, 1386-1398. <https://doi.org/10.1111/1365-2478.12365>.
 13. Baniamerian, Jamaledin, Behrooz Oskooi, and Maurizio Fedi, 2017, "Source imaging of potential fields through a matrix space-domain algorithm." *Journal of Applied Geophysics* 136, 51-60. <https://doi.org/10.1016/j.jappgeo.2016.10.035>.
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Conferences

1. R. Orosei, J. Baniamerian, G. Caprarelli, B. Cosciotti, S. E. Lauro, E. Mattei, E. Pettinelli, K. Primm, F. Soldovieri and D. E Stillman, The Search for Liquid Water Beneath the Martian South Polar Layered Deposits. 20th Annual Meeting of the Asia Oceania Geosciences Society (AOGS2023).
2. David Stillman, R. Orosei, E. Pettinelli, S.E. Lauro, E. Mattei, B. Cosciotti, J. Baniamerian, G. Caprarelli, F. Soldovieri & K.M. Primm, Summing up the “Brine Below the SPLD” Debate. 54th Lunar and Planetary Science Conference. Poster
3. Lauro S, Pettinelli E, Caprarelli G, Baniamerian J, Mattei E, Cosciotti B, Stillman D, Primm K, Soldovieri F, Orosei R. Using MARSIS signal attenuation to constrain SPLD basal temperature and composition. In European Planetary Science Congress 2022 Sep (pp. EPSC2022-1052). Oral Presentation.
4. Lauro SE, Baniamerian J, Pettinelli E, Mattei E, Cosciotti B. A New Centroid Frequency-Based Algorithm to Estimate the Attenuation of Ground Penetrating Radar. In 82nd EAGE Annual Conference & Exhibition 2021 Oct 18 (Vol. 2021, No. 1, pp. 1-5). European Association of Geoscientists & Engineers. Oral Presentation.
5. Liu, S., Baniamerian, J. Inversion of magnetic data to fully reconstruct the Magnetization vector and its application to mineral exploration, 18th Iranian Geophysical Conference, May 2018, pages 1031-1034. Oral Presentation.
6. Baniamerian, J., Fedi, M. An Improved CDEXP Transformation of GGT for Imaging Gravity Sources, EAGE 2016, Workshop 16 - Inversion Highlights, Vienna, Austria. Oral Presentation.
7. Baniamerian, J., Fedi, M., Oskooi, B. Transforming matrices in the space domain for concurrent upward continuation and differentiation of potential fields: an application to multiscale methods. 26th IUGG General Assembly, Czech Republic, 2015. Poster.

Domestic Papers

1. Baniamerian, J., Radad, M. and Mohammadi, V.M., Interpretation of magnetic and gravity anomalies by using extended Euler deconvolution method, Journal of Analytical and Numerical Methods in Mining Engineering, 2020, Volume,10, Issue, 23, page159-171.
2. Baniamerian, J., Oskooi, B., Fedi, Maurizio. Comparison of different methods for the estimation of depth-location and source-type of magnetic and gravity fields. Journal of earth and physics space, 2015. (In Farsi with a short abstract in English)
3. Baniamerian, J., Oskooi, B., Byrami, A. Approximation of depth and structural index of magnetic sources using multiscale analysis and DEXP methods. Journal of earth and physics space, 2015. (In Farsi with a short abstract in English)
4. Baniamerian, J., Oskooi, B., Imani, P. The analytical signal and derivatives of the fractional orders for potential fields application in processing and interpretation, Iranian Journal of Geophysics (IJG), 2012, V6, Issue3, P1-P16. (. (In Farsi with a short abstract in English)
5. Baniamerian, J., Oskooi, B., Combination of analytic signal and Euler Deconvolution methods (AN_EUL) for interpretation of magnetic data in 2-D cases. Journal of Physics of Earth and Space, 2011. V37, Issue3. (In Farsi with a short abstract in English)
6. Ahmadi, M., A., Ardestani, V., Baniamerian, J. The use of two-dimensional discrete wavelet transform in the boundary estimation of gravity sources, 2011. Iranian Journal of Geophysics V5, Issue 3, P55-P66. (In Farsi with a short abstract in English)
7. Baniamerian, J., Oskooi, B., Bastani, M. Estimation of depth, structural index and location of the magnetic sources by using combined method of AN-EUL. Iranian Journal of Geophysics (IJG), 2011. V6, Issue 3, P 1-16. (In Farsi with a short abstract in English)
8. Baniamerian, J., Oskooi, B. Comparing the results of applying the AN_EUL on magnetic data, reduced to the pole magnetic data and pseudo gravity data. Iranian Journal of Geophysics (IJG), 2009. V3, Issue 2, P 43-59. (In Farsi with a short abstract in English)