

PUBLICATIONS AND PRESENTATIONS

Peter Vajda

WOS–SCI, CCC PAPERS

- (38) Camacho A.G., **Peter Vajda**, J. Fernández, **2023/2024**
GROWTH-23: An integrated code for inversion of complete Bouguer gravity anomaly or temporal gravity changes
Computers and Geosciences 182 (January 2024), 105495 (online 23. Nov. 2023),
<https://doi.org/10.1016/j.cageo.2023.105495>
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- (37) Pánisová J., Greco* F., Carbone D., Branca S.F., **Vajda Peter**, **2023**
New insights into geological setting of the summit area of Mount Etna volcano (Italy) inferred from 2D gravity data modelling.
Front. Earth Sci. 11: 1171884. doi: 10.3389/feart.2023.1171884, (online 24 May 2023),
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- (36) Bódi Jozef, **Peter Vajda***, Antonio G. Camacho, Juraj Papčo, José Fernández, **2023**
On gravimetric detection of thin elongated sources using the Growth inversion approach
Surveys in Geophysics (Online 29 April 2023), 44(6): 1811–1835 (2023)
<https://doi.org/10.1007/s10712-023-09790-z>
(WOS-SCI, CCC, Q1 (JCR), Q1 (SJR), IF(2022) = 4.6, IF(5yr) = 6.6, eISSN: 1573-0956, Springer Nature)
- (35) **Vajda Peter**, Antonio G. Camacho, José Fernández, **2022/2023**
Benefits and limitations of the Growth inversion approach in volcano gravimetry demonstrated on the revisited Tenerife 2004–2005 unrest.
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- (34) Camacho Antonio G., **Peter Vajda**, Craig A. Miller, José Fernández, **2021**
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(WOS-SCI, CCC, Q1 (JCR), Q1 (SJR), IF(2020) = 4.379, **Nature Portfolio**, eISSN 2045-2322)
- (33) **Vajda Peter**, P. Zahorec, C.A. Miller, H. Le Mével, J. Papčo, A.G. Camacho, **2021**
Novel treatment of the deformation–induced topographic effect for interpretation of spatiotemporal gravity changes: Laguna del Maule (Chile).
Journal of Volcanology and Geothermal Research 414 (June 2021) 107230
invited research paper, doi 10.1016/j.jvolgeores.2021.107230
(WOS-SCI, CCC, Q1 (SJR), Q2 (JCR), IF(2020) = 2.789, Elsevier, ISSN: 0377-0273)
- (32) **Vajda Peter**, I. Foroughi, P. Vaníček, R. Kingdon, M. Santos, M. Sheng, M. Goli, **2020**
Topographic gravimetric effects in earth sciences: Review of origin, significance and implications.
Earth-Science Reviews, <https://doi.org/10.1016/j.earscirev.2020.103428>
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- (31) **Vajda Peter**, P. Zahorec, J. Papčo, D. Carbone, F. Greco, M. Cantarero, **2020**

Topographically predicted vertical gravity gradient field and its applicability in 3D and 4D microgravimetry: Etna (Italy) case study,
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- (30) **Vajda Peter**, Pavol Zahorec, Dušan Bilčík, Juraj Papčo, **2019**
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- (29) Prutkin Ilya, **Peter Vajda**, Thomas Jahr, Florian Bleibinhaus, Pavel Novák, Robert Tenzer, **2017**
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- (28) Prutkin Ilya, **Peter Vajda**, Jo Gottsmann, **2014**
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- (24) **Vajda Peter**, Prutkin I, Tenzer R, Jentzsch G, **2012**
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- (33) **Vajda Peter**, Ilya Prutkin, Jo Gottsmann (**2013**) On the possibilities of modern gravimetric methods in interpreting gravity changes in volcanic areas, workshop „Tatry 2013 – New pieces of knowledge based on realizing and interpreting geodetic observations“, 21–22 November, 2013, Štrbské pleso, High Tatras, Slovakia (oral)

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- (27) Tenzer R, Novák P, Abdalla A, **Vajda P**, Ellmann A (**2011**) A spectral modelling of the gravitational contribution of the far-zone topography. Session G1.1: Geodetic Theory - Recent Developments in Geodetic Theory, EGU General Assembly, April 3–8, 2011, Vienna, **Austria** (poster)
- (26) Mikuška, J., Marušiak, I., Karcol, R., Pašteka, R., Tenzer, R., **Vajda, P.**, Novák, P. (**2010**) The modeling of the atmospheric gravity correction using a new analytical integration approach. European Geosciences Union, General Assembly 2010, Vienna, **Austria**, May 2–7, 2010 (poster)
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- (19) **Vajda, P.**, A. Ellmann, B. Meurers, P. Vaníček, P. Novák, and R. Tenzer (2008) Harmonic continuation and gravimetric inversion of gravity in areas of negative geodetic heights. IAG International Symposium on Gravity, Geoid and Earth Observation, 23–27 June 2008, Chania, **Crete, Greece**. (poster)
- (18) **Vajda P.**, A. Ellmann, B. Meurers, P. Vaníček, P. Novák, R. Tenzer (2007) On a refined global topographic correction to gravity disturbances. XXIV IUGG General Assembly, July 2–13, 2007, Perugia, **Italy**, (oral)
- (17) Tenzer, R., A. Ellmann, P. Novák, **P. Vajda**, P. Vaníček, P. Moore (2007) The Earth's gravity field components of the differences between gravity disturbances and gravity anomalies. XXIV IUGG General Assembly, July 2–13, 2007, Perugia, **Italy**, (poster)
- (16) Pánisová J. and **P. Vajda**. (2007) Analysis of synthetic TFM patterns for salt domes. XXIV IUGG General Assembly, July 2–13, 2007, Perugia, **Italy** (poster)
- (15) Tenzer, R., P. Novák, A. Ellmann, and **P. Vajda** (2006) Far-zone effects in gravimetric geoid modelling by means of the surface truncation coefficients. 1st International Symposium of The International Gravity Field Service, August 28 – September 1, 2006, Istanbul, **Turkey**, (poster)
- (14) **Vajda, P.**, P. Vaníček, P. Novák, R. Tenzer and A. Ellmann (2006) Secondary indirect effects in gravimetry. 2-nd Workshop on International Gravity Field Research, Smolenice castle, Slovak Republic, May 8–9, 2006, (oral)
- (13) **Vajda, P.**, P. Vaníček and B. Meurers (2006) On the relation between anomalous gravity and the attraction of earth's subsurface anomalous density. 2-nd Workshop on International Gravity Field Research, Smolenice castle, Slovak Republic, May 8–9, 2006, (oral)
- (12) Tenzer R., P. Novák, P. Moore, and **P. Vajda** (2006) Effect of atmosphere on the gravity anomaly. 2-nd Workshop on International Gravity Field Research, Smolenice castle, Slovak Republic, May 8–9, 2006, (oral)
- (11) **Vajda P.** and J. Pánisová (2006) The geophysical indirect effect and its impact estimated for the territory of central Europe. 2-nd Workshop on International Gravity Field Research, Smolenice castle, Slovak Republic, May 8–9, 2006, (poster)
- (10) **Vajda, P.** (2006) Inverse problem of gravimetry. 15-th Conference of Slovak Physicists, Stará Lesná, High Tatras, Slovak Republic, Sept. 11–14, 2006, (**invited plenary talk**)
- (9) **Vajda, P.**, Brimich, L., Jentzsch, G., Jahr, T., and Weise, A. (2003) Interpreting temporal changes of gravity using the TFM: Mayon volcano case study. 1st Workshop on International Gravity Field Research, Graz, **Austria**, May 8–9, 2003, (oral)
- (8) **Vajda, P.**, Brimich, L. (2003) Analytical derivation of the of the instant of the dimple pattern in 2D-truncation filtering methodology for a point source of heat geodynamic model. EGS-AGU-EUG Joint Assembly, Nice, **France**, April 6–11, 2003, (poster)

- (7) **Vajda, P.**, Brimich, L., Jentzsch, G., Jahr, T., and Weise, A. (2003) Interpreting temporal changes of gravity at Mayon using the TFM: preliminary results. Workshop „Time-variable deformation and gravity fields: theory, observations, and modelling.“ Casa de los Volcanes, **Lanzarote, Canary Islands, Spain**, February 18–21, 2003, (oral)
- (6) **Vajda, P.** (2003) Interpreting the temporal changes of gravity by means of the truncation filtering methodology (TFM). Workshop „Time-variable deformation and gravity fields: theory, observations, and modelling“, Casa de los Volcanes, **Lanzarote, Canary Islands, Spain**, February 18–21, 2003, (oral)
- (5) **Vajda, P.**, M. Bielik, and V. Pohánka (2002) An interpretation of the Kolárovo gravity anomaly using the truncation filtering methodology. The XVII Congress of Carpathian-Balkan Geological Association, Bratislava, Slovakia, September 1–4, 2002, (oral)
- (4) **Vajda, P.** (2000) Interpreting gravity data by means of truncation filtering. 8th International Alpine Gravimetry Colloquium, Leoben, **Austria**, May 4–5, 2000, (oral)
- (3) **Vajda, P.**, P. Vaníček, Z. Martinec and M. Paton (1993) Truncated Geoid and the Inverse Gravimetric Problem: Progress Report. The CGU Annual Meeting, Banff, **Alberta, Canada**, May 9–11, 1993, (oral)
- (2) **Vajda, P.**, M.C. Santos, P. Vaníček, P. Ong and M.R. Craymer (1992) A Comparison of Geoidal Deflections Computed from the UNB'91 Geoid with Observed Astrodeflections. The 1992 Spring Meeting of AGU-CGU-MSA, Montreal, **Canada**, May 12–16, 1992, (oral)
- (1) **Vajda, P.** (1990) Investigation of Possibility to Determine the Palaeointensity of the Thermoremanently Magnetised Synthetic Magnetite by the Method of Anhysteretic Magnetising. New Trends in Geomagnetism, Castle of Bechyne, South Bohemia, Czechoslovakia, Sept. 24–29, 1990, (oral)

Lectures (invited)

- (7) **Vajda Peter (2018)**. Issues to be treated carefully in interpretation of spatiotemporal gravity changes. Seminar of Institute of Geophysics and Tectonics, School of Earth and Environment, University of Leeds, **Leeds, UK**, 19 November 2018 (invited IGT seminar talk)
- (6) **Vajda Peter**, I Prutkin, J Gottsmann, M Bielik, V Bezák, R Tenzer (2014) On some innovations in gravimetric inversion methodology: structural and geodynamic applications. 14 November 2014, Dublin Institute for Advanced Studies, Geophysics Section, **Dublin, Ireland** (invited lecture).
- (5) **Vajda Peter**, Ilya Prutkin, Jo Gottsmann (2013) Reinterpretation of Teide 2004–2005 gravity changes by 3D line segments approximation. 15th annual conference of IAMG: Frontiers of Mathematical Geosciences: New approaches to understand the natural world, 2–6 Sept., 2013, **Madrid, Spain** (invited talk)
- (4) **Vajda, P (2006)** On the definition, use and inversion of anomalous gravity. “Present Research in Advanced Geodesy” lecture series, Institute of Geodesy and Geophysics, TU Wien, **Vienna, Austria**, November 29, 2006 (invited lecture)
- (3) **Vajda, P (2002)** Geodynamic Applications of the Truncation Filtering Methodology. Lecture at the Friedrich-Schiller-Universität Jena, Institut für Geowissenschaften, Jena, **Germany**, June 7, 2002

- (2) Vajda, P (**2002**) Applications of the Truncation Filtering Methodology. Lecture at the Freie Universität Berlin, Institut für Geologische Wissenschaften, Berlin, **Germany**, June 5, 2002
- (1) Vajda, P (**1996**) Truncated geoid and the gravimetric inverse problem. Lecture at the Geodetic and Geophysical Research Institute in Sopron, **Hungary**, November 12, 1996