João de Teixeira da Encarnação

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Journal publications

1. Bezděk, A., Sebera, J., **Teixeira da Encarnação, J.**, Klokočník, J., (2016). "Time-variable gravity fields derived from GPS tracking of Swarm". In: *Geophys. J. Int.* 205.3, pp. 1665–1669. DOI: 10.1093/gji/ggw094.

2. Siemes, C., **de Teixeira da Encarnação, J.**, Doornbos, E., IJssel, J., Kraus, J., Pereštý, R., Grunwaldt, L., Apelbaum, G., Flury, J., Holmdahl Olsen, P. E., (2016). "Swarm accelerometer data processing from raw accelerations to thermospheric neutral densities". In: *Earth, Planets Sp.* 68.1, p. 92. DOI: 10.1186/s40623-016-0474-5.

3. **Teixeira da Encarnação, J.**, Arnold, D., Bezděk, A., Dahle, C., Doornbos, E., Van Den Ijssel, J., Jäggi, A., Mayer-Gürr, T., Sebera, J., Visser, P., Zehentner, N., (2016). "Gravity field models derived from Swarm GPS data". In: *Earth, Planets Sp.* 68.1, p. 127. DOI: 10.1186/s40623-016-0499-9.

4. IJssel, J., **Encarnação, J.**, Doornbos, E., Visser, P., (2015). "Precise science orbits for the Swarm satellite constellation". In: *Adv. Sp. Res.* 56.6, pp. 1042–1055. DOI: 10.1016/j.asr.2015.06.002.

5. Hashemi Farahani, H., Ditmar, P., Klees, R., **Teixeira da Encarnação, J.**, Liu, X., Zhao, Q., Guo, J., (2013). "Validation of static gravity field models using GRACE K-band ranging and GOCE gradiometry data". In: *Geophys. J. Int.* 194.2, pp. 751–771. DOI: 10.1093/gji/ggt149.

6. Olsen, N. (2013). "The Swarm Satellite Constellation Application and Research Facility (SCARF) and Swarm data products". In: *Earth, Planets Sp.* 65.11, pp. 1189–1200. DOI: 10.5047/eps.2013.07.001.

7. Visser, P., Doornbos, E., IJssel, J., **Teixeira da Encarnação, J.,** (2013). "Thermospheric density and wind retrieval from Swarm observations". In: *Earth, Planets Sp.* 65.11, pp. 1319–1331. DOI: 10.5047/eps.2013.08.003.

8. Ditmar, P., **Encarnação, J.**, Hashemi Farahani, H., (2012). "Understanding data noise in gravity field recovery on the basis of inter-satellite ranging measurements acquired by the satellite gravimetry mission GRACE". In: *J. Geod.* 86.6, pp. 441–465. DOI: 10.1007/s00190-011-0531-6.

9. Gunter, B. C. B., **Encarnacao, J.**, Ditmar, P., Klees, R., Encarnaçao, J., Ditmar, P., Klees, R., (2011). "Using Satellite Constellations for Improved Determination of Earth's Time-Variable Gravity". In: *J. Spacecr. Rockets* 48.2, pp. 368–377. DOI: 10.2514/1.50926.

10. Resendes, D. P., Mota, S., Mendonça, J. T., Sanders, B., **Encarnação, J.**, Del Amo, J. G., (2007). "Laser Propulsion for Ground Launch". en. In: *J. Propuls. Power* 23.1, pp. 73–80. DOI: 10.2514/1.24527.

Conference proceedings (peer-reviewed)

1. Gunter, B. C., **Encarnação, J.**, Ditmar, P., Klees, R., Van Barneveld, P. W. L., Visser, P., (2012). "Deriving global time-variable gravity from precise orbits of the Iridium NEXT constellation". In: *Adv. Astronaut. Sci.* Vol. 142, pp. 2087–2096. URL: http://www.univelt.com/book=3354.

2. Gunter, B. C., Ditmar, P., **Encarnação, J.,** (2010). "The determination of time variable gravity from a constellation of non-dedicated satellites". In: *Adv. Astronaut. Sci.* Pittsburgh, pp. 1999–2007. URL: http://www.univelt.com/book=1349.

3. Gunter, B. C., **Encarnação, J.**, Ditmar, P., Klees, R., (2009). "The use of satellite constellations and formations for future gravity field missions". In: *Adv. Astronaut. Sci.* Savannah, pp. 1357–1368. URL: http://www.univelt.com/book=1451.

4. **Encarnação, J.**, Ditmar, P., Liu, X., (2008). "Analysis of Satellite Formations in the Context of Gravity Field Retrieval". In: *3rd Int. Symp. Form. Flying, Mission. Technol.* Ed. by K Fletcher. Vol. ESA SP-654. 654 SP. Rijswijk: ESA Communication Production Office, pp. 1–9. URL: https://tinyurl.com/3rdISFFMT.

5. **Encarnação, J.**, Klees, R., Zapreeva, E., Ditmar, P., Kusche, J., (2008). "Influence of Hydrology-Related Temporal Aliasing on the Quality of Monthly Models Derived from GRACE Satellite Gravimetric Data". In: *Obs. our Chang. Earth* 133, pp. 323–328. DOI: 10.1007/978-3-540-85426-5_38.

6. Resendes, D. P., Mota, S., Mendonça, J. T., Sanders, B., **Encarnação, J.**, Amo, J. G., Myrabo, L. N., (2006). "Laser Propulsion for ESA Missions: Ground to Orbit Launch Project Overview — Part 1". en. In: *AIP Conf. Proc.* Vol. 830. 1. AIP, pp. 576–587. DOI: 10.1063/1.2203299.

7. Resendes, D. P., Mota, S., Mendonça, J. T., Sanders, B., **Encarnação, J.**, Del Amo, J. G., (2005). "Laser Propulsion for Ground to Orbit Launch". In: *29th Int. Electr. Propuls. Conf.* IEPC-2005-310. URL: http://erps.spacegrant.org/uploads/images/images/iepc_articledownload_1988-2007/2005index/310.pdf.

Invited Presentations

1. **Teixeira Encarnação, J.** (2017). "Satellite Gravimetry". In: *Summer Sch. Data Assim. its Appl. Oceanogr. Hydrol. Risk Saf. Reserv. Eng.* URL: http://data-assimilation.com.

2. **Teixeira Encarnação, J.**, Arnold, D., Bezdek, A., Dahle, C., Doornbos, E., Ijssel, J. V. D., Jäggi, A., Mayer-gürr, T., Sebera, J., Visser, P., Zehentner, N., (2015). "First monthly gravity field solutions derived from GPS orbits of Swarm". In: *AGU Fall Meet. Abstr.* San Francisco, CA, USA. URL: https://agu.confex.com/agu/fm15/webprogram/Paper71877.html.

Conference Attendance

1. **Teixeira da Encarnação, J.**, Save, H., Tapley, B. D., Rim, H. J., (2018). "Analysis of GRACE's accelerometer scale-factor calibration". In: *AGU Fall Meet.* Washington, D.C.

2. **Encarnacao, J.**, Save, H., Siemes, C., Doornbos, E., Tapley, B., (2017). "Temperature corrected-calibration of GRACE's accelerometer". In: *AGU Fall Meet. Abstr.* 5.512, p. 78759. DOI: 10.13140/RG.2.2.20396.97929. URL: https://agu.confex.com/agu/fm17/meetingapp.cgi/Paper/288232.

3. **Teixeira Encarnação, J.**, Arnold, D., Bezdek, A., Dahle, C., Doornbos, E., Ijssel, J. V. D., Jäggi, A., Mayer-gürr, T., Sebera, J., Shum, C., Visser, P., Zehentner, N., (2017). "Gravity field models derived from Swarm GPS data". In: *EGU Gen. Assem.* Vienna, Austria. URL: https://tinyurl.com/gswarmEGU2017.

4. **Teixeira Encarnação, J.**, Arnold, D., Bezdek, A., Dahle, C., Jäggi, A., Mayer-gürr, T., Sebera, J., Visser, P., Zehentner, N., (2016). "Gravity field models derived from Swarm GPS data". In: *EGU Gen. Assem.* Vienna, Austria. DOI: 10.13140/RG.2.1.3909.4642.

5. **Encarnacao, J.**, Ditmar, P., Klees, R., (2015). *Impact of Orbit Position Errors on Future Satellite Gravity Models*. URL: http://adsabs.harvard.edu/abs/2015AGUFM.G31B1114E.

6. **Teixeira Encarnação, J.**, IJssel, J., Doornbos, E., Visser, P. N., (2015). "Frequency domain combination of POD-driven and measured accelerations". In: *5th Swarm Data Qual. Work.* Paris, France.

7. **Teixeira Encarnação, J. G.**, IJssel, J., Doornbos, E., Visser, P., (2014a). "POD-assisted calibration of Swarms Accelerometer Data". In: *4th Swarm Data Qual. Work.* December. Postdam, Germany.

8. **Teixeira Encarnação, J.**, Doornbos, E., IJssel, J., Visser, P. N., (2014b). "Combination of Swarm's Uncalibrated Accelerometer Data with POD-Based Accelerometry". In: *3rd Swarm Sci. Meet.* Copenhagen, Denmark, p. 2.

9. **Teixeira Encarnação, J.**, IJssel, J., Doornbos, E., Visser, P. N., (2014c). "Preliminary analysis of accelerometer data". In: *2nd Swarm Data Qual. Work.* Rome, Italy.

10. **Encarnação, J.**, Ditmar, P., Liu, X., (2008). "Analysis of Satellite Formations in the Context of Gravity Field Retrieval". In: *3rd Int. Symp. Form. Flying, Mission. Technol.* Ed. by K Fletcher. Vol. ESA SP-654. 654 SP. Rijswijk: ESA Communication Production Office, pp. 1–9. URL: https://tinyurl.com/3rdISFFMT.

11. **Teixeira Encarnação, J.**, Ditmar, P. G., Klees, R., (2008). "Spectral analysis of positioning modelling errors in gravimetric data". In: *IAG Symp. Gravity, Geoid, Earth Obs.* Chania, Greece.

12. **Teixeira Encarnação, J. G.**, Ditmar, P. G., Klees, R., (2007a). "Temporal aliasing in GRACE monthly solutions". In: *Intergeo*. Leipzig, Germany.

13. **Teixeira Encarnação, J.**, Ditmar, P. G., Klees, R., (2007b). "Influence of hydrology-related temporal aliasing on the quality of monthly models derived from GRACE satellite gravimetric data". In: *VMSG Symp.* Utrecht, The Netherlands.

14. **Encarnação, J.** (2002). "Single Stage To Orbit Minimum Requirements Through Numerical Simulation". In: *34th COSPAR Sci. Assem. Second World Sp. Congr.* Houston, TX, USA: IAF. URL: http://adsabs.harvard.edu/abs/2002iaf..confE.984T.

Conference Contributions

1. **de Teixeira da Encarnação, J.**, Save, H., Tapley, B., Rim, H. J., (2018a). "GRACE's accelerometer scale-factor calibration". In: *GRACE/ GRACE-FO Sci. Team Meet.* Potsdam, Germany: Copernicus Office. URL: http://presentations.copernicus.org/GSTM-2018-66_presentation.pdf.

2. **de Teixeira da Encarnação, J.**, Arnold, D, Bezdek, A, Doornbos, E, Ellmer, M, Guo, J, IJssel, J, Iorfida, E, Jäggi, A, Klokočnik, J, Mao, X, Mayer-Gürr, T, Meyer, U, Sebera, J, Shum, C. K., Visser, P, Zehentner, N, Zhang, Y., Zhang, C, (2018b). "Observing Earth's mass transport processes with the Swarm satellites". In: *Gravity, Geoid Height Syst. 2 Symp.* Copenhagen, Denmark.

3. **Encarnacao, J.**, Visser, P., Doornbos, E., IJssel, J., Mao, X., Iorfida, E., Arnold, D., Jäggi, A., Meyer, U., Bezdek, A., Sebera, J., Klokocnik, J., Ellmer, M., Mayer-Gürr, T., Zehentner, N., Guo, J., Luk, P., Shum, C. K., Zhang, Y. Y., (2018). "Signal contents of combined monthly gravity field models derived from Swarm GPS data Multi-approach gravity field models from Swarm GPS data". In: *EGU Gen. Assem.* April, EGU2018–10. DOI: 10.13140/RG.2.2.24263.39845. URL: https://www.researchgate.net/publication/324545998_Signal_contents_of_combined_monthly_gravity_field_models_derived_from_Swarm_GPS_data.

4. Jäggi, A, Meyer, U., Schreiter, L., Sterken, V., Dahle, C., Arnold, D., **Encarnacao, J.**, Visser, P., IJssel, J., Mao, X., Iorfida, E., Bezdek, A., Sebera, J., Mayer-GÜrr, T., Zehentner, N., Shum, C. K., Lück, C., Rietbroek, R., Kusche, J., (2018). "Assessment of individual and combined gravity field solutions from Swarm GPS data and mitigation of systematic errors". In: *EGU Gen. Assem.* Vienna, Austria, EGU2018–89.

5. Visser, P., **Encarnação, J. T.**, Doornbos, E., IJssel, J., Mao, X., Iorfida, E., Arnold, D., Jäggi, A., Meyer, U., Bezděk, A., Sebera, J., Klokočnik, J., Ellmer, M., Mayer-Gürr, T., Zehentner, N., Guo, J., Zhang, Y., Shum, C. K., (2018). "Multi-approach Gravity Field Models from Swarm GPS data". In: *42nd COSPAR Sci. Assem.* Pasadena, CA, USA, No. 20613.

6. Zehentner, N., Mayer-Gürr, T., Ellmer, M., **Encarnacao, J. T.**, Visser, P., Doornbos, E., IJssel, J. V., Mao, X., Iorfida, E., Arnold, D., Jäggi, A., Meyer, U., Bezdek, A., Sebera, J., Klokocnik, J., Guo, J., Shum, C., (2018). "Investigations of GNSS-derived baselines for gravity field recovery". In: *EGU Gen. Assem.* Vienna, Austria, EGU2018–11920. DOI: 10.13140/RG.2.2.18307.81440. URL: ftp://ftp.tugraz.at/outgoing/ITSG/poster/zehentner_etal_EGU2018.pdf.

7. Zhang, C., Guo, J.-Y., Bezděk, A., Shum, C. K., Cai, Z., Zhang, Y., **de Teixeira da Encarnação, J.**, Visser, P., (2018). "Swarm Temporal Gravity Field Estimates Using Acceleration Approach". In: *9th Int. Work. TibXS (Multi-observations Interpret. Tibet. Xinjiang Sib.* Zhangye, Gansu Province, China.

8. **Teixeira Encarnação, J.**, Arnold, D., Bezdek, A., Dahle, C., Jäggi, A., Mayer-gürr, T., Sebera, J., Shum, C., Visser, P., Zehentner, N., (2017). "Swarm as an Observing Platform for Large Surface Mass Transport Processes". In: *4th Swarm Sci. Meet.* Banff, Canada. URL: http://tinyurl.com/Swarm-Banff.

9. Doornbos, E., **de Teixeira da Encarnação, J.**, IJss, J., Siemes, C., Grunwaldt, L., Peresty, R., Kraus, J., Flury, J., Apelbaum, G., Olsen, P. E. H., (2016). "Thermospheric neutral densities derived from Swarm accelerometer and GPS data". In: *ESA Living Planet Symp. 2016*.

10. Jäggi, A., Meyer, U., Jean, Y., Susnik, A., Dach, R., Weigelt, M., Dam, T., Li, Z., Chen, Q., Flechtner, F., Gruber, C., Poropat, L., Güntner, A., Gouweleeuw, B., Mayer-Gürr, T., Kvas, A., Klinger, B., Martinis, S., Zwenzner, H., Bruinsma, S., Lemoine, J.-M., Biancale, R., Flury, J., Bandikova, T., Bourgogne, S., Steffen, H., **de Teixeira da Encarnação, J.**, Horwath, M., (2016). "European Gravity Service for Improved Emergency Management - Status and Project Highlights". In: *Int. Assoc. Geod. Symp.* Springer, p. 1.

11. Siemes, C., Grunwaldt, L., Peresty, R., Kraus, J., Doornbos, E., **de Teixeira da Encarnação, J.**, IJssel, J., Flury, J., Apelbaum, G., Olsen, P. E. H., (2016). "Improvements of the Swarm Accelerometer Data Processing". In: *ESA Living Planet Symp. 2016*.

12. Sneew, N, Iran Pour, S, Reubelt, T, Daras, I, Murböck, M, Pail, R, Gruber, T, Visser, P, **Encarnacao, J**, IJssel, J, Others, (2016). "ESA SC4MGV Study - Assessment of Satellite Constellations for Monitoring the Variations in Earth Gravity Field". In: *Living Planet Symp. 2016*.

13. Astafyeva, E, Zakharenkova, I, Foerster, M, Doornbos, E, **Teixeira da Encarnacao, J.**, Siemes, C, (2015). "Ionospheric and Thermospheric Response to the 2015 St. Patrick's Day Storm - a Global Multi-Instrumental Overview". In: *AGU Fall Meet. Abstr.*

14. Doornbos, E., Siemes, C., **Teixeira da Encarnação, J**, Perestý, R., Grunwaldt, L., Kraus, J., Holmdahl Olsen, P. E., IJssel, J, Flury, J., Apelbaum, G., (2015). "Processing of Swarm Accelerometer Data into Thermospheric Neutral Densities". In: *AGU Fall Meet. Abstr.* Abstract SA31D-2371. San Francisco, CA, USA. URL: http://abstractsearch.agu.org/meetings/2015/FM/SA31D-2371.html.

15. Bruinsma, S, Doornbos, E, Siemes, C, Perestý, R, Kraus, J, Bezdek, A, IJssel, J, **Teixeira da Encarnação, J**, Visser, P. N., (2014). "Results from the First Year of Swarm GPS Receiver and Accelerometer Data". In: *AGU Fall Meet. Abstr.*

16. Iran Pour, S, Weigelt, M, Murböck, M, Tonetti, S, Visser, P, Daras, I, **Encarnacao, J**, Cesare, S, Siemes, C, IJssel, J, Others, (2014). "Search strategies for optimal double pair scenarios for future gravity satellite missions - experience from the ESA SC4MGV project". In: *5th Int. GOCE User Work.*

17. Doornbos, E, Bruinsma, S, Fritsche, B, Visser, P, Van Den IJssel, J, **de Teixeira da Encarnação, J.**, Kern, M, (2013). "Air density and wind retrieval using GOCE data". In: *ESA Living Planet Symp.* Vol. 722, p. 7.

18. Olsen, N., Alken, P., Beggan, C., Chulliat, A., Doornbos, E., **Encarnação, J.**, Floberghagen, R., Friis-Christensen, E. A., Hamilton, B., Hulot, G., IJssel, J. V. D., Kuvshinov, A. V., Lesur, V., Luhr, H., Macmillan, S., Maus, S., Olsen, P. E. H., Park, J., Plank, G., Püthe, C., Ritter, P., Rother, M., Sabaka, T. J., Stolle, C., Thebault, E., Thomson, A. W. P., Tøffner-Clausen, L., Velimsky, J., Visser, P. N., (2013). "SCARF - the swarm satellite constellation application and research facility". In: *ESA Living Planet Symp.* Edinburgh, United Kingdom: European Space Agency, p. 100. URL: https://tinyurl.com/SCARFLPS2013.

19. Doornbos, E, Bruinsma, S, Koppenwallner, G, Fritsche, B, IJssel, J, Visser, P, **Teixeira da Encarnação, J**, Kern, M, (2012). "Thermospheric density and wind from GOCE thruster activation and accelerometer data". In: *EGU Gen. Assem. Conf. Abstr.* Vol. 14, p. 5634.

20. Gunter, B. C., **Teixeira da Encarnação, J**, Ditmar, P, Klees, R, (2012). "Potential contributions to space geodesy from the IridiumNEXT constellation". In: *AGU Fall Meet. Abstr.*

21. Gunter, B, **Teixeira da Encarnação, J**, Ditmar, P, Klees, R, (2011). "An investigation into new advances in geodesy utilizing future satellite constellations". In: *AGU Fall Meet. Abstr.*

22. Ditmar, P., Hashemi Farahani, H., **Teixeira da Encarnação, J.,** (2010). "Mitigation of along-track artifacts in unconstrained mass transport models based on GRACE satellite data". In: *EGU Gen. Assem. Conf. Abstr.* Vol. 12, p. 10393.

23. Gunter, B, **Teixeira da Encarnação, J**, Ditmar, P, Klees, R, (2010). "Using existing satellite constellations to complement current and future dedicated gravity field missions". In: *AGU Fall Meet. Abstr.*

24. Hashemi Farahani, H, Ditmar, P, **Teixeira da Encarnação, J**, Liu, X, (2010). "Contribution of an accurate determination of GRACE satellite orbits to precise mass transport modeling". In: *EGU Gen. Assem. Conf. Abstr.* Vol. 12, p. 10867.

Miscellaneous Contributions

1. Sneeuw, N., Iran-Pour, S., Reubelt, T., Sneeuw, N., Daras, I., Murböck, M., Gruber, T., Pail, R., Weigelt, M., Dam, T., Visser, P., **Teixeira Encarnação, J.**, IJssel, J., Tonetti, S., Cornara, S., Cesare, S., (2015). *Assessment of Satellite Constellations for Monitoring the Variations in Earth Gravity Field "SC4MGV"*. Tech. rep. European Space Agency. URL: https://tinyurl.com/SC4MGV.

2. Anselmi, A., Cesare, S., Visser, P., Van Dam, T., Sneeuw, N., Gruber, T., Altes, B., Christophe, B., Cossu, F., Ditmar, P., Murboeck, M., Parisch, M., Renard, M., Reubelt, T., Sechi, G., **Teixeira Encarnação, J,** (2010). *Assessment of a next Generation Gravity Mission for Monitoring the Variations of Earth's Gravity Field*. Tech. rep. Thales Alenia Space report SD-RP-AI-0668: ESA Contract No. 22643/09/NL/AF. URL: https://tinyurl.com/ANGMMVEGF.