João de Teixeira da Encarnação

Curriculum Vitae

Center for Space Research
3925 W Braker Lane
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Austin TX 78759-5316, USA
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5 Little Stanhope St
Flat 4
BA1 2BH Bath, UK
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EDUCATION

2015 **Ph.D. in Space Geodesy**
Geoscience and Remote Sensing (GRS), Delft University of Technology (TU Delft)
Next-generation satellite gravimetry for measuring mass transport in the Earth system
Committee: Roland Klees (Promotor), Pavel Ditmar (Supervisor), Bert Vermeersen, Byron Tapley, A. Jäggi, Frank Flechtner, Ramon Hanssen

2004 **M.Sc. in Aerospace Engineering**
Astrodynamics and Space missions (AS), TU Delft
Numerical Simulation of Launch Vehicles
Supervisor: Boudewijn Ambrosius

2000 **Lic. in Aerospace Engineering**
Instituto Superior Técnico (IST), Universidade de Lisboa (ULisboa)
Optimum Aerodynamic Shape for a High Altitude Long Endurance Aerostatic Platform
Supervisor: Theo van Holten (TU Delft, under the Erasmus Programme)

PROFESSIONAL EXPERIENCE

2018 – present	Research Engineering/Scientist Associate, Center for Space Research (CSR), University of Texas at Austin (UTexas), USA
2016 – 2018	Postdoctoral Fellow, CSR, UTexas, USA
2011 – 2016	Research Associate, Astrodynamics and Space missions, TU Delft, the Netherlands
2007 – 2015	PhD Candidate, GRS, TU Delft, the Netherlands
2005 – 2006	Stress Engineer, Global Technics, Leiden, the Netherlands
2004 – 2005	Aerospace Engineer, Delta-Utec, Leiden, the Netherlands

PUBLICATIONS

Refereed Journal publications

2020 **Teixeira da Encarnacao, J.**, Visser, P., Arnold, D., Bezděk, A., Doornbos, E., Sebera, J., Shum, C. K., Zhang, C., Zhang, Y., Dahle, C., "Description of the multi-approach gravity field models from Swarm GPS data". In: *Earth System Science Data* (accepted).

2020 **Teixeira da Encarnação, J.**, Save, H., Tapley, B., Rim, H.-j., "Effect of accelerometer parameterizations on the quality of GRACE solutions". In: *Journal of Spacecraft and Rockets* (accepted).

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

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

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

2015 IJssel, J., **Encarnação, J.**, Doornbos, E., Visser, P., "Precise science orbits for the Swarm satellite constellation". In: *Advances in Space Research* 56.6, pp. 1042–1055. DOI: 10.1016/j.asr.2015.06.002.

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

2013 Olsen, N., Friis-Christensen, E., Floberghagen, R., Alken, P., Beggan, C. D., Chulliat, A., Doornbos, E., **Encarnação, J. T.**, Hamilton, B., Hulot, G., IJssel, J., Kuvshinov, A., Lesur, V., Lühr, H., Macmillan, S., Maus, S., Noja, M., Olsen, P. E. H., Park, J., Plank, G., Püthe, C., Rauberg, J., Ritter, P., Rother, M., Sabaka, T. J., Schachtschneider, R., Sirol, O., Stolle, C., Thébault, E., Thomson, A. W. P., Tøffner-Clausen, L., Velímský, J., Vigneron, P., Visser, P. N., "The Swarm Satellite Constellation Application and Research Facility (SCARF) and Swarm data products". In: *Earth, Planets and Space* 65.11, pp. 1189–1200. DOI: 10.5047/eps.2013.07.001.

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

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

2011 Gunter, B. C., **Encarnação, J.**, Ditmar, P., Klees, R., "Using Satellite Constellations for Improved Determination of Earth's Time-Variable Gravity". In: *Journal of Spacecraft and Rockets* 48.2, pp. 368–377. DOI: 10.2514/1.50926.

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

Peer Reviewed Conference Proceedings

2012 Gunter, B. C., **Encarnação, J.**, Ditmar, P., Klees, R., Van Barneveld, P. W. L., Visser, P., "Deriving global time-variable gravity from precise orbits of the Iridium NEXT constellation". In: *Advances in the Astronautical Sciences*. Vol. 142, pp. 2087–2096.

2010 Gunter, B. C., Ditmar, P., **Encarnação, J.,** "The determination of time variable gravity from a constellation of non-dedicated satellites". In: *Advances in the Astronautical Sciences*. Pittsburgh, pp. 1999–2007.

2009 Gunter, B. C., **Encarnação, J.**, Ditmar, P., Klees, R., "The use of satellite constellations and formations for future gravity field missions". In: *Advances in the Astronautical Sciences*. Savannah, pp. 1357–1368.

2008 **Encarnação, J.**, Ditmar, P., Liu, X., "Analysis of Satellite Formations in the Context of Gravity Field Retrieval". In: *3rd International Symposium on Formation Flying, Missions and Technologies (SP-654)*. Ed. by K Fletcher. ESA SP-654. Rijswijk, the Netherlands: 23-25 Apr.

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

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

2005 Resendes, D. P., Mota, S., Mendonça, J. T., Sanders, B., **Encarnação, J.**, Del Amo, J. G., "Laser Propulsion for Ground to Orbit Launch". In: *29th International Electric Propulsion Conference*. IEPC-2005-310.

Other Publications

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

2010 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 da Encarnação, J.,** *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.

AWARDS

2017 H2020 Marie Skłodowska-Curie Individual Fellowship Seal of Excellent to the proposal on *Direct Gravimetric data assimilation into Geophysical models*

GRANTS

Sep. 2017 – May 2019 *Multi-approach gravity field models from Swarm GPS data*
European Space Agency (Noordwijk, Netherlands)
100k €
DISC contract SW-CO-DTU-GS-111(part of ESA contract 4000109587/13/I-NB)

May 2019 – Jun. 2020 *Transfer To Operation of production of EGF_SHA_2_ products*
European Space Agency (Noordwijk, Netherlands)
73k €
DISC contract SW-CN-DTU-GS-027(part of ESA contract 4000109587/13/I-NB)

Feb. 2020 – Feb. 2023 *uPGRADE - Miniaturized Prototype for GRavity field Assessment using Distributed Earth-orbiting assets*
Fundação para a Ciência e a Tecnologia (Lisbon, Portugal)
900k € (in addition to 1.4M € for Portuguese project partners)
Funding opportunity: AAC 04/SI/2019, project nr: 45927

INVITED PRESENTATIONS

2017 **Teixeira da Encarnação, J.**, "Satellite Gravimetry". In: *Summer School On Data Assimilation and its Applications In Oceanography, Hydrology, Risk, Safety And Reservoir Engineering*. Sibiu, Romania.

2015 **Teixeira da 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., "First monthly gravity field solutions derived from GPS orbits of Swarm". In: *AGU Fall Meeting*. San Francisco, CA, USA: 14-18 Dec.

CONFERENCE ACTIVITY

Oral presentations

2019 **Encarnação, J. T.**, Visser, P., Arnold, D., Bezděk, A., Doornbos, E., Guo, J., IJssel, J., Iorfida, E., Jäggi, A., Klokočník, J., Krauss, S., Mao, X., Mayer-Gürr, T., Meyer, U., Sebera, J., Shum, C., Zhang, C., Zhang, Y., "Multi-approach gravity field models from Swarm GPS data". In: *9th Swarm Data Quality Workshop*. 2. Prague, Czech Republic, pp. 16–20. DOI: 10.13140/RG.2.2.34189.90084.

2019 Visser, P., **Teixeira da Encarnação, J.**, Doornbos, E., IJssel, J., Mao, X., Iorfida, E., Arnold, D., Jäggi, A., Meyer, U., Bezděk, A., Sebera, J., Klokočník, J., Ellmer, M., Mayer-Gürr, T., Krauss, S., Guo, J., Zhang, C., Shum, C., Zhang, Y., "Complete 5-years time series of combined monthly gravity field models derived from Swarm GPS data". In: *EGU General Assembly*. Vol. 21. EGU2019-13412. Vienna, Austria: 7-12 Apr., p. 13412. DOI: 10.13140/RG.2.2.11449.01123.

2018 **Encarnação, 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., "Signal contents of combined monthly gravity field models derived from Swarm GPS data Multi-approach gravity field models from Swarm GPS data". In: *EGU General Assembly*. Vienna, Austria: 8-13 Apr. DOI: 10.13140/RG.2.2.24263.39845.

2018 Jäggi, A, Meyer, U., Schreiter, L., Sterken, V., Dahle, C., Arnold, D., **Encarnação, 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., "Assessment of individual and combined gravity field solutions from Swarm GPS data and mitigation of systematic errors". In: *EGU General Assembly*. EGU2018-8944. Vienna, Austria: 8-13 Apr.

2018 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., "Multi-approach Gravity Field Models from Swarm GPS data". In: *42nd COSPAR Scientific Assembly*. July. Pasadena, CA, USA: 14-22 Jul., pp. 14–22.

2017 **Teixeira da Encarnação, J.**, Arnold, D., Bezdek, A., Dahle, C., Jäggi, A., Mayer-gürr, T., Sebera, J., Shum, C., Visser, P., Zehentner, N., "Swarm as an Observing Platform for Large Surface Mass Transport Processes". In: *4th Swarm Science Meeting*. Banff, Canada: 20-24 Mar.

2015 **Teixeira da 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., "First monthly gravity field solutions derived from GPS orbits of Swarm". In: *AGU Fall Meeting*. San Francisco, CA, USA: 14-18 Dec.

2015 **Teixeira da Encarnação, J.**, IJssel, J., Doornbos, E., Visser, P. N., "Frequency domain combination of POD-driven and measured accelerations". In: *5th Swarm Data Quality Workshop*. Paris, France: 7 - 10 Sep.

2014 **Teixeira da Encarnação, J.**, IJssel, J., Doornbos, E., Visser, P., "POD-assisted calibration of Swarms Accelerometer Data". In: *4th Swarm Data Quality Workshop*. Postdam, Germany: 2-5 Dec.

2014 **Teixeira da Encarnação, J.**, Doornbos, E., IJssel, J., Visser, P. N., "Combination of Swarm's Uncalibrated Accelerometer Data with POD-Based Accelerometry". In: *3rd Swarm Science Meeting*. Copenhagen, Denmark: 19-20 Jun.

2014 **Teixeira da Encarnação, J.**, IJssel, J., Doornbos, E., Visser, P. N., "Preliminary analysis of accelerometer data". In: *2nd Swarm Data Quality Workshop*. Rome, Italy: 26-27 Mar.

2008 **Encarnação, J.**, Ditmar, P., Liu, X., "Analysis of Satellite Formations in the Context of Gravity Field Retrieval". In: *3rd International Symposium on Formation Flying, Missions and Technologies (SP-654)*. Ed. by K Fletcher. ESA SP-654. Rijswijk, the Netherlands: 23-25 Apr.

2002 **Encarnação, J.**, "Single Stage To Orbit Minimum Requirements Through Numerical Simulation". In: *34th COSPAR Scientific Assembly, The Second World Space Congress*. Houston, TX, USA: 10-19 Oct.

Poster presentations

2019 **Teixeira da Encarnação, J.**, Visser, P, Arnold, D, Bezdek, A, Doornbos, E, Ellmer, M, Guo, J, Ijssel, J. V. D., Iorfida, E, Jäggi, A, Klokočník, J., Mao, X., Mayer-Gürr, T., Meyer, U., Sebera, J., Shum, C., Zehentner, N., Zhang, Y., Zhang, C., "Earth's Mass Transport Processes Observed by the Swarm Satellites during the GRACE / GRACE-FO Gap". In: *ESA Living Planet Symposium*. Milano, Italy. DOI: 10.13140/RG.2.2.34631.55207.

2018 **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, "Observing Earth's mass transport processes with the Swarm satellites". In: *Gravity, Geoid and Height Systems 2018 (GGHS-2018) Symposium*. Copenhagen, Denmark: 17-21 Sep.

2018 **Teixeira da Encarnação, J.**, Save, H., Tapley, B., Rim, H. J., "GRACE's accelerometer scale-factor calibration". In: *GRACE/ GRACE-FO Science Team Meeting*. Potsdam, Germany: 9-11 Oct.

2018 **Teixeira da Encarnação, J.**, Save, H., Tapley, B. D., Rim, H. J., "Analysis of GRACE's accelerometer scale-factor calibration". In: *AGU Fall Meeting*. G13C-0528. Washington, D.C.: 10-14 Dec.

2018 Zehentner, N., Mayer-Gürr, T., Ellmer, M., **Teixeira da Encarnacao, J.**, 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., "Investigations of GNSS-derived baselines for gravity field recovery". In: *EGU General Assembly*. EGU2018-11920. Vienna, Austria: 8-13 Apr. DOI: 10.13140/RG.2.2.18307.81440.

2018 Zhang, Y., Shum, C. K., Bezděk, A., Shang, K., Zhang, C., Guo, J., **Teixeira da Encarnação, J.**, Visser, P., "Temporal Gravity Field Recovery Using The Swarm Mission Constellation High-Low GPS Tracking Data And Energy Balance Approach". In: *AGU Fall Meeting*. G13C-0550. Washington D.C.: 10-14 Dec.

2017 **Encarnação, J.**, Save, H., Siemes, C., Doornbos, E., Tapley, B., "Temperature corrected-calibration of GRACE's accelerometer". In: *AGU Fall Meeting*. G31B-0904. New Orleans: 11-15 Dec. DOI: 10.13140/RG.2.2.20396.97929.

2017 **Teixeira da 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., "Gravity field models derived from Swarm GPS data". In: *EGU General Assembly*. EGU2017-9218. Vienna, Austria: 23-28 Apr.

2016 Doornbos, E., **Teixeira da Encarnação, J.**, IJss, J., Siemes, C., Grunwaldt, L., Peresty, R., Kraus, J., Flury, J., Apelbaum, G., Olsen, P. E. H., "Thermospheric neutral densities derived from Swarm accelerometer and GPS data". In: *ESA Living Planet Symposium*. Prague, Czech Republic: 9-13 May.

2016 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., **Teixeira da Encarnação, J.**, Horwath, M., "European Gravity Service for Improved Emergency Management - Status and Project Highlights". In: *International Symposium on Gravity, Geoid and Height Systems*. Thessaloniki, Greece: 19-23 Sep.

2016 Siemes, C., Grunwaldt, L., Peresty, R., Kraus, J., Doornbos, E., **Teixeira da Encarnação, J.**, IJssel, J., Flury, J., Apelbaum, G., Olsen, P. E. H., "Improvements of the Swarm Accelerometer Data Processing". In: *ESA Living Planet Symposium*. Prague, Czech Republic: 9-13 May.

2016 Sneew, N, Iran Pour, S, Reubelt, T, Daras, I, Murböck, M, Pail, R, Gruber, T, Visser, P, **Teixeira da Encarnação, J**, IJssel, J, Others, "ESA SC4MGV Study - Assessment of Satellite Constellations for Monitoring the Variations in Earth Gravity Field". In: *ESA Living Planet Symposium*. Prague, Czech Republic: 9-13 May.

2016 **Teixeira da Encarnação, J.**, Arnold, D., Bezdek, A., Dahle, C., Jäggi, A., Mayer-gürr, T., Sebera, J., Visser, P., Zehentner, N., "Gravity field models derived from Swarm GPS data". In: *EGU General Assembly*. EGU2016-59. Vienna, Austria: 17-22 Apr. DOI: 10.13140/RG.2.1.3909.4642.

2015 Astafyeva, E, Zakharenkova, I, Foerster, M, Doornbos, E, **Teixeira da Encarnação, J.**, Siemes, C, "Ionospheric and Thermospheric Response to the 2015 St. Patrick's Day Storm - a Global Multi-Instrumental Overview". In: *AGU Fall Meeting*. San Francisco, CA, USA: 12-16 Dec.

2015 Doornbos, E., Siemes, C., **Teixeira da Encarnação, J**, Perestý, R., Grunwaldt, L., Kraus, J., Holmdahl Olsen, P. E., IJssel, J, Flury, J., Apelbaum, G., "Processing of Swarm Accelerometer Data into Thermospheric Neutral Densities". In: *AGU Fall Meeting*. Abstract SA31D-2371. San Francisco, CA, USA: 14-18 Dec.

2015 **Encarnação, J.**, Ditmar, P., Klees, R., "Impact of Orbit Position Errors on Future Satellite Gravity Models". In: *AGU Fall Meeting*. 14-18 Dec.

2014 Bruinsma, S, Doornbos, E, Siemes, C, Perestý, R, Kraus, J, Bezdek, A, IJssel, J, **Teixeira da Encarnação, J**, Visser, P. N., "Results from the First Year of Swarm GPS Receiver and Accelerometer Data". In: *AGU Fall Meeting*. San Francisco, CA, USA: 15-19 Dec.

2014 Iran Pour, S, Weigelt, M, Murböck, M, Tonetti, S, Visser, P, Daras, I, **Encarnação, J**, Cesare, S, Siemes, C, IJssel, J, Others, "Search strategies for optimal double pair scenarios for future gravity satellite missions - experience from the ESA SC4MGV project". In: *5th International GOCE User Workshop*. Paris, France: 25-28 Nov.

2013 Doornbos, E, Bruinsma, S, Fritsche, B, Visser, P, Van Den IJssel, J, **Teixeira da Encarnação, J.**, Kern, M, "Air density and wind retrieval using GOCE data". In: *ESA Living Planet Symposium*. Edinburgh, United Kingdom: 9-13 Sep.

2013 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., "SCARF - the swarm satellite constellation application and research facility". In: *ESA Living Planet Symposium*. Edinburgh, United Kingdom: 9-13 Sep.

2012 Doornbos, E, Bruinsma, S, Koppenwallner, G, Fritsche, B, IJssel, J, Visser, P, **Teixeira da Encarnação, J**, Kern, M, "Thermospheric density and wind from GOCE thruster activation and accelerometer data". In: *EGU General Assembly*. Vienna, Austria: 22-27 Apr.

2012 Gunter, B. C., **Teixeira da Encarnação, J**, Ditmar, P, Klees, R, "Potential contributions to space geodesy from the IridiumNEXT constellation". In: *AGU Fall Meeting*. San Francisco, CA, USA: 3-7 Dec.

2011 Gunter, B, **Teixeira da Encarnação, J**, Ditmar, P, Klees, R, "An investigation into new advances in geodesy utilizing future satellite constellations". In: *AGU Fall Meeting*. SA24A-03. San Francisco, CA, USA: 5-9 Dec.

2010 Ditmar, P., Hashemi Farahani, H., **Teixeira da Encarnação, J.,** "Mitigation of along-track artifacts in unconstrained mass transport models based on GRACE satellite data". In: *EGU General Assembly*. Vienna, Austria: 2-7 May.

2010 Gunter, B, **Teixeira da Encarnação, J**, Ditmar, P, Klees, R, "Using existing satellite constellations to complement current and future dedicated gravity field missions". In: *AGU Fall Meeting*. G41A-0788. San Francisco, CA, USA: 13-17 Dec.

2010 Hashemi Farahani, H, Ditmar, P, **Teixeira da Encarnação, J**, Liu, X, "Contribution of an accurate determination of GRACE satellite orbits to precise mass transport modeling". In: *EGU General Assembly*. Vienna, Austria: 2-7 May.

2008 **Teixeira da Encarnação, J.**, Ditmar, P. G., Klees, R., "Spectral analysis of positioning modelling errors in gravimetric data". In: *IAG Symposium on Gravity, Geoid, and Earth Observation*. Chania, Greece: 23-27 Jun.

2007 **Teixeira da Encarnação, J.**, Ditmar, P. G., Klees, R., "Temporal aliasing in GRACE monthly solutions". In: *Intergeo*. Leipzig, Germany: 25-27 Sep.

2007 **Teixeira da Encarnação, J.**, Ditmar, P. G., Klees, R., "Influence of hydrology-related temporal aliasing on the quality of monthly models derived from GRACE satellite gravimetric data". In: *VMSG Symposium*. Utrecht, The Netherlands: 7-8 Nov.

TEACHING EXPERIENCE

TU Delft — Tutor for the Design Synthesis Exercise, (2007–2011)
Tutor for the Test, Analysis & Simulation project (2013–2016)

RESEARCH SUPERVISION

2019 — **Co-supervisor**, visiting TU Delft student, CSR
MSc thesis

2016 — **Co-supervisor**, one external student from the Aeronautical Engineering at Inholland University of Applied Sciences, TU Delft
Bachelor of Engineering final project

RESEARCH PROJECTS

2020 – 2023	uPGRADE - Miniaturized Prototype for GRavity field Assessment using Distributed Earth-orbiting assets (Funding opportunity: AAC 04/SI/2019, project nr: 45927)
2019 – 2020	Multi-approach gravity field models from Swarm GPS data, transfer to operation of production of EGF_SHA_2_ products (DISC contract SW-CO-DTU-GS-111, part of ESA contract 4000109587/13/I-NB)
2017 – 2019	Multi-approach gravity field models from Swarm GPS data (DISC contract SW-CN-DTU-GS-027, part of ESA contract 4000109587/13/I-NB)
2016 – 2019	gravity Recovery And Climate Experiment (GRACE) Two-year Mission Extension (NASA contract NNL14AA00C)
2013 – 2015	Assessment of Satellite Constellations for Monitoring the Variations in Earth's Gravity Field (ESA contract 4000108663/13/NL/MV)
2013	GOCE+ Theme3: Air density and wind retrieval using GOCE data (ESA contract 400010284/11/NL/EL)
2011 – 2016	Development of the Swarm Level 2 Algorithms and Associated Level 2 Processing Facility (ESA Contract 4000102140/10/NL/JA)
2010	Assessment of a Next Generation Gravity Mission for Monitoring the Variations of Earth's Gravity Field (ESTEC contract 22643/09/NL/AF)
2008	Monitoring and Modelling Individual Sources of Mass Distribution and Transport in the Earth System by Means of Satellites (ESA contract 20403)

SERVICE TO PROFESSION

Reviewer for scientific papers submitted to *Advances in Space Research*, *Annales Geophysicae*, *Journal of Geodesy*, *Communications in Nonlinear Science and Numerical Simulation*, *IEEE Geoscience and Remote Sensing Letters*, *International Association of Geodesy Symposia*, *Journal of Geophysical Research: Solid Earth*, *Remote Sensing*, *Sensors* and *Solid Earth*, cf. Publons

EXTRA TRAINING

2017	Dealing with Difficult People, Jeff Stellmach, UTexas
2017	Conflict Management Foundations, Kimberly Sullivan, UTexas
2017	Leading without formal authority, Emil Kresl, UTexas
2017	Meeting effectiveness, Emil Kresl, UTexas
2015	Scientific Writing, Sören Johnson, TU Delft
1993	Certificate of Proficiency in English
1993	Radio Amateur, call sign CT3IU, class B

COURSES PREPARED TO TEACH

Satellite Geodesy
Satellite Gravimetry
Astrodynamics
Earth Observation
Data Processing
Programming (any level/language)

LANGUAGES

	Speaking	Reading	Writing
Portuguese		(mother tongue)	
English	excellent	excellent	excellent
Spanish	good	good	fair
Italian	good	good	fair
Dutch	fair	fair	limited
French	fair	fair	limited

PROFESSIONAL MEMBERSHIPS

since 2012	American Geophysical Union
since 2016	European Geosciences Union

REFERENCES

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