

CURRICULUM VITAE

XENOPHON A. FRANTZIS

PERSONAL INFORMATION

Last name:	Frantzis	E – Mail:	xfrantzis@tuc.gr
Given Name:	Xenophon	Place of Birth:	Mitilini, Lesvos, Greece
Nationality:	Greek	Date of Birth:	Dec/13/1971
Address:	Plakoures Akrotiriou 73100, Chania, Crete, Greece	Citizen	Petra, Lesvos
Tel.	+30-28210-69109 (Home) +30-28210-37687 (Office) +30-6972-026370 (Mobile)	Marital Status:	Married
		Occupation:	Mineral Resources Engineer
		Military Obligations:	Fulfilled (1997-1998).

STUDIES

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- **2001:** Technical University of Crete, Mineral Resources Engineering Department, Chania
Master of Engineering.
 - **1996:** Technical University of Crete, Mineral Resources Engineering Department, Chania
Mineral Resources Engineering diploma, Grade 7.05/10.
 - **1989:** High school of Petra, Lesvos General Grade 18.2/20.
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TRAINING

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- **May 2010:** BERNESE training course, German Geodetic Research Institute (DGFI), Munich, Germany.
 - **Jul 2009:** QOCA training course, Istituto Nazionale di Geofisica e Vulcanologia, Bologna, Italy.
 - **Nov 2006:** GAMIT/GLOBK advanced training course, Istituto Nazionale di Geofisica e Vulcanologia, Grottaminarda, Italy.
 - **Jun 2005:** GAMIT/GLOBK training course, Dynamique Terrestre et Planetaire, Observatoire Midi-Pyrenees, CNRS, Toulouse, France.
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PROFESSIONAL EXPERIENCE

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- **Research Associate** at the Laboratory of Geodesy & Geomatics Engineering of the Technical University of Crete (September 1999 – Today, permanent position since January 2003), with the following responsibilities:
 - Laboratory Support on the following courses of the Mineral Resources Engineering Department: Technical Geodesy, Remote Sensing, Environmental Remote Sensing, Navigation Satellite Systems.
 - Support on the undergraduate and post graduate theses of the laboratory.
 - Management and Maintenance of the Lab's Geodetic Infrastructure in Western Crete (GNSS sites, meteorological equipment, tide gauges).
 - **Participation in research projects:**
 - **Jul/01/2022 – Feb/28/2023. "CRYOSAT-2"**, Calibration of CryoSat Interferometric Range and Phase Using a Transponder. **GNSS data analysis and production of atmospheric delays.**
 - **Jan/01/2021 – May/31/2022. "SERAC"**, Sentinel-3 Radar Altimeter Calibration in Crete- Operational Support. **GNSS data analysis and production of atmospheric delays.**
 - **Jun/01/2020 – Dec/31/2020 "FRM4S6"**, Fiducial Reference Measurements for Sentinel 6. **GNSS data analysis and production of atmospheric delays.**
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- **Oct/01/2018 – May/31/2020. “SERAC”, Sentinel-3 Radar Altimeter Calibration in Crete- Operational Support. GNSS data analysis and production of atmospheric delays.**
 - **Mar/01/2019 – Nov/30/2020. ”Drones2GNSS”, UAV-Assisted GNSS Positioning in obstruct environments. Algorithms and positioning software.**
 - **Jan/18/2018 – Mar/31/2018. “SERAC”, Sentinel-3 Radar Altimeter Calibration in Crete- Operational Support: Technical report on tide gauge performance.**
 - **Jan/08/2017 – Jan/31/2017. Transponder Calibration of Jason-3 altimeter during its tandem mission: Creation of Interface Control Document (ICD) for data/product archival and dissemination.**
 - **Jul/20/2016 – Aug/31/2016. “FRM4ALT”, Fiducial Reference Measurements for Altimetry: GNSS data analysis.**
 - **Jan/01/2009 – Aug/31/2011. “SOFIA”, Enhancement of Crete’s potential for a dedicated calibration facility for satellite radar altimeters and for tectonic deformation monitoring using continuously operating geodetic arrays: GNSS data analysis, instrument installation and maintenance, data management.**
 - **Feb/01/2007 – Aug/31/2007. “KASTELI”, Reinforcement of Monitoring Networks and Development of an Automated Warning System for Earthquakes and Tsunamis in Crete: GNSS data analysis.**
 - **3/5/2004 – 31/12/2004. “CRINNO – EMERIC”, Development of an Expert System for the Monitoring, Management & Protection of the Natural Landscape & Environmental Resources of the Island of Crete - EMERIC”, Prefecture of Crete - Crete Innovative Region CRINNO: Determination of Ground Control Points, (GCP’s) with the use of GPS systems for the geometric correction of satellite images.**
 - **1/12/2001 – 31/11-2004. “GAVDOS”, Establishment of a European radar altimeter calibration and sea-level monitoring site for Jason, Envisat and EURO-GLOSS-GAVDOS, European Union, Contract No: EVR1-CT-2001-40019: Instrument Installation and Maintenance, GNSS Data Analysis.**
- **Other Projects:**
- **Nov 2010:** GNSS CORS station Installation at Sougia area, Chania, Crete, for the Dept. of Marine, Earth, & Atmospheric Sciences, North Carolina State University, Raleigh, USA
 - **Oct 2010:** GNSS CORS station Installation on Gavdos isle, Chania, Crete, for the University of Maryland, Baltimore County, Maryland, USA
 - **Nov 2009:** GNSS CORS station Installation at Menies area, Chania, Crete, for the Dept. of Marine, Earth, & Atmospheric Sciences, North Carolina State University, Raleigh, USA
 - **Jul 2009:** GNSS CORS station Installation at Seli area, Chania, Crete, for the Dept. of Marine, Earth, & Atmospheric Sciences, North Carolina State University, Raleigh, USA
 - **Oct 2007 - February 2008:** Underwater target positioning with RTK GPS and acoustic sensors at souda area, Chania, Greece for the Greek Ministry of Defence
 - **Sep 2004:** Determination of Ground Control Points, (GCP’s) using GPS for the geometric correction of a satellite image in the area of Chania, Crete for the Water Resources Management and Coastal Mechanics Lab of the Technical University of Crete, Greece.
 - **Feb 2000:** Determination of Ground Control Points, (GCP’s) using GPS for the geometric correction of digital maps in the urban area of Chania, Crete, for the Applied Mechanics Lab of the Technical University of Crete, Greece.
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- **Jan 2000:** Determination of submerged electronic sensors with the use of differential GPS in the marine area north of Heraklion, Crete, Greece for the Institute of Marine Biology of Crete, Greece.
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SPECIAL SKILLS

- Strong knowledge on the installation procedure of GNSS CORE sites (site selection, pillar construction, equipment, data communications), 13 sites installed over the last 11 years.
 - Extensive experience on the installation/operation/data-management of a variety of GPS receivers (ASHTECH, TRIMBLE, LEICA, NOVATEL, SEPTENTRIO).
 - Extensive experience in the installation/operation/data-management of meteorological sensors, and their collocation with GNSS receivers. 5 systems installed over the last 10 years.
 - Extensive experience in the installation/operation/data-management of water level sensors (tide gauges) of any type (radar, acoustic, pressure), produced by the major manufacturers (Aquatrak, OTT, VEGAPuls, General Acoustics) and their collocation with GNSS receivers. 6 systems installed over the last 10 years.
 - Experience in the installation/configuration of telemetry systems (UHF, GPRS, WiFi, Satellite) for data transmission.
 - Advanced use of the GAMIT/GLOBK and the QOCA software packages for GNSS data processing and time series analysis.
 - Familiar with BERNESE software for GNSS data processing.
 - Proficiency in computer networking and data communications.
 - Excellent use of Microsoft based operating systems.
 - Advanced use of LINUX based operating systems.
 - Shell scripting for data manipulation and transmission.
 - Excellent use of office software (word processors, spreadsheets, presentations).
 - Basic programming knowledge in FORTRAN and MATLAB.
 - Use of commercial software packages for image processing and drawing:
COREL DRAW, COREL PHOTO PAINT, MICROSOFT VISIO, AUTOCAD
 - Familiar with DC wiring and power supply system installation.
 - Experience in various geodetic methods, such as precise leveling, total station surveys (triangulation, resection, etc.) and GNSS surveys (RTK, static, stop & go, kinematic).
 - Planning and realization of GPS measurements with the following techniques:
Static Positioning, Differential GPS, Kinematic positioning and Real Time Kinematic positioning.
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LANGUAGES

Greek, Native Language

English, First Certificate, University of Cambridge (Grade A).

PUBLICATIONS – CONFERENCES

- Mertikas, S. P., Lin, M., Piretzidis, D., Kokolakis, C., Donlon, C., Ma, C., **Frantzis, X** . . . others. (2023). Absolute Calibration of the Chinese HY-2B Altimetric Mission with Fiducial Reference Measurement Standards. *Remote Sensing*, 15, 1393.
 - Mertikas, S. P., Donlon, C., Mavrocordatos, C., Piretzidis, D., Kokolakis, C., Cullen, R., **Frantzis, X**, . . . others. (2022). Performance evaluation of the CDN1 altimetry Cal/Val transponder to internal and external constituents of uncertainty. *Advances in Space Research*, 70, 2458–2479.
 - Mertikas, S. P., Donlon, C., Féménias, P., Cullen, R., Galanakis, D., **Frantzis, X.**, & Tripolitsiotis, A. (2020). Fiducial Reference Measurements for Satellite Altimetry Calibration: The Constituents. *Fiducial Reference*
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Measurements for Altimetry: Proceedings of the International Review Workshop on Satellite Altimetry Cal/Val Activities and Applications, (pp. 1–6).

- Mertikas, S. P., Donlon, C., Femenias, P., Mavrocordatos, C., Galanakis, D., Guinle, T., **Frantzis, X.**, ... others. (2020). Absolute Calibration of Sentinel-3A and Jason-3 Altimeters with Sea-Surface and Transponder Techniques in West Crete, Greece. Fiducial Reference Measurements for Altimetry: Proceedings of the International Review Workshop on Satellite Altimetry Cal/Val Activities and Applications, (pp. 41–47).
- Mertikas, S., Partsinevelos, P., Tripolitsiotis, A., Kokolakis, C., Petrakis, G., & **Frantzis, X.** (2020). Validation of Sentinel-3 OLCI integrated water vapor products using regional GNSS measurements in crete, Greece. *Remote Sensing*, 12, 2606.
- Mertikas, S., Tripolitsiotis, A., Donlon, C., Mavrocordatos, C., Féménias, P., Borde, F., **Frantzis, X.**, . . . others. (2020). The ESA Permanent Facility for altimetry calibration: Monitoring performance of radar altimeters for Sentinel-3A, Sentinel-3B and Jason-3 using transponder and sea-surface calibrations with FRM standards. *Remote Sensing*, 12, 2642.
- Mertikas, S.P., Craig Donlon, Pierre Femenias, Rob Cullen, Demetris Galanakis, **Xenophon Frantzis**, Achilles Tripolitsiotis. (2019) Fiducial Reference Measurements for Satellite Altimetry Calibration: The Constituents. In: . International Association of Geodesy Symposia. Springer, Berlin, Heidelberg.
- Mertikas, S.; Donlon, C.; Féménias, P.; Mavrocordatos, C.; Galanakis, D.; Tripolitsiotis, A.; **Frantzis, X.**; Kokolakis, C.; Tziavos, I.N.; Vergos, G.; Guinle, T. Absolute Calibration of the European Sentinel-3A Surface Topography Mission over the Permanent Facility for Altimetry Calibration in west Crete, Greece. *Remote Sens.* 2018, 10, 1808.
- Mertikas, S.P.; Donlon, C.; Féménias, P.; Mavrocordatos, C.; Galanakis, D.; Tripolitsiotis, A.; **Frantzis, X.**; Tziavos, I.N.; Vergos, G.; Guinle, T. Fifteen Years of Cal/Val Service to Reference Altimetry Missions: Calibration of Satellite Altimetry at the Permanent Facilities in Gavdos and Crete, Greece. *Remote Sens.* 2018, 10, 1557.
- S. Mertikas, C. Donlon, P. Femenias, C. Mavrocordatos, D. Galanakis, I. Tziavos, F. Boy, G. Vergos, O. Andersen, X. Frantzis, M. Lin , A. Tripolitsiotis, "The Permanent Facility for Satellite Altimetry Calibration in Gavdos/Crete, Greece: Fifteen years of Cal/Val Service", 25 years of progress in radar altimetry symposium , Portugal, 24-29 Sep 2018.
- Mertikas, S.; Donlon, C.; Mavrocordatos, C.; Féménias, P.; Galanakis, D.; Tziavos, I.; Boy, F.; Vergos, G.; Andersen, O.; **Frantzis, X.**; et al. Multi-mission calibrations results at the Permanent Facility for Altimetry Calibration in west Crete, Greece attaining Fiducial Reference Measurement Standards. In Proceedings of the Ocean Surface Topography Science Team Meeting, Miami, FL, USA, 23–27 October 2017.
- Mertikas, S.P., C. Donlon, P. Féménias, C. Mavrocordatos, I.N. Tziavos, , D. Galanakis, F. Boy, J-D. Desjonquieres, G. Vergos, O-B. Andersen, A. Tripolitsiotis, **X. Frantzis**, H. Peng, "Absolute altimeter calibrations using the Gavdos/West Crete Cal-Val site", Sentinel-3 Validation Team Workshop, 15-17 Feb 2017, Frascati, Rome, Italy.
- Mertikas, S.P., C. Donlon,. C. Mavrocordatos, I.N. Tziavos, J-D. Desjonquieres, D. Galanakis, G. Vergos, O-B. Andersen, A. Tripolitsiotis, N. Picot, **X. Frantzis**, H. Peng, "Gavdos/West Crete Cal-Val site: Over a decade calibrations for altimetry", Ocean Surface Topography Science Team Meeting, 31 Oct - 4 Nov 2016, La Rochelle, France.
- Mertikas, S.P., C. Donlon, C. Mavrocordatos, I.N. Tziavos, D. Galanakis, A. Tripolitsiotis, **X. Frantzis**, O-B. Andersen, "Calibration and Validation of SWOT oceanographic products using Gavdos & Crete Permanent Infrastructure", SWOT Science Team Meeting, 13-16 June 2016, California, USA.
- Mertikas S., C. Donlon, C. Mavrocordatos, I.N. Tziavos, D. Galanakis, G. Vergos, O.B. Andersen, A. Tripolitsiotis, **X. Frantzis**, M. Lin, F. Qiao, "Gavdos/West Crete Cal-Val site: Over a decade calibrations for Jason series, SARAL/AltiKa, CryoSat-2, Sentinel-3 and HY-2 altimeter satellites", ESA Living Planer Symposium 2016, Prague, Czech Republic, 9-13 May 2016.
- Stelios P. Mertikas, Xinghua Zhou, Fangli Qiao, Antonis Daskalakis, Mingsen Lin, Hailong Peng, Ilias N. Tziavos, George Vergos, Achilleas Tripolitsiotis, **Xenophon Frantzis**, First preliminary results for the absolute calibration of the Chinese HY-2 altimetric mission using the CRS1 calibration facilities in West Crete, Greece, *Advances in Space Research*, Volume 57, Issue 1, 1 January 2016, Pages 78-95, ISSN 0273-1177, <http://dx.doi.org/10.1016/j.asr.2015.10.016>.
- Maggipinto T., Colella L. Biagi P.F., Schiavulli L., Ligonzo T., Ermini A., Martinelli G., Palangio P., Moldovan I., Silva H., Bezzeghoud M., Contadakis M., Arabelos D. N., Scordilis E., **Frantzis, X.**, Katzis K., Buyuksarac A.,

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- D'Amico S., 2014. Pre-seismic radio anomaly observed on the occasion of the MW=6.5 earthquake occurred in Crete on October 12, 2013. *Geophysical Research Abstracts*, Vol. 16, EGU2014-3683
- S.P. Mertikas · Zervakis V · Tziavos I · Andersen O. B · **X. Frantzis** · Daskalakis A · Vergos G · Ampatzidis D., Analysis of Sea Level Trends with Altimetry Around the Coastal Zone of Gavdos Permanent Cal/Val Facility, 7th COASTAL ALTIMETRY WORKSHOP, At Boulder, USA, 2013.
 - V. Tserolas, S. P. Mertikas, **X. Frantzis**, The Western Crete geodetic infrastructure: Long-range power-law correlations in GPS time series using Detrended Fluctuation Analysis, *Advances in Space Research*, Volume 51, Issue 8, 15 April 2013, Pages 1448-1467, ISSN 0273-1177, 10.1016/j.asr.2012.08.002.
 - S. P. Mertikas, A. Daskalakis, I. N. Tziavos, O. B. Andersen, G. S. Vergos, A. Tripolitsiotis, V. Zervakis, **X. Frantzis**, P. Partsinevelos, Altimetry, bathymetry and geoid variations at the Gavdos permanent Cal/Val facility, *Advances in Space Research*, Volume 51, Issue 8, 15 April 2013, Pages 1418-1437, ISSN 0273-1177, 10.1016/j.asr.2012.10.021.
 - Pavlis E. C., K. Evans , P. Milas, D. Paradissis, B. A. Massinas, and **X. Frantzis**, (2012), Aegean Sea Level Network Eastern Mediterranean Altimeter Calibration Network – eMACnet. EGU General Assembly 2012, *Geophysical Research Abstracts*, Vol. 14, EGU2012-6811-1, 2012
 - Mertikas, S.P., R. T. Ioannides, I. N. Tziavos, G. S. Vergos, W. Hausleitner, **X. Frantzis**, A. Tripolitsiotis, P. Partsinevelos, D. Andrikopoulos (2010). Statistical Models and Latest Results in the Determination of the Absolute Bias for the Radar Altimeters of Jason Satellites using the Gavdos facility. *Marine Geodesy*, 33: 1, 114-149, doi: 10.1080/01490419.2010.488973.
 - Mertikas S. P., A. Daskalakis, V. Tserolas, W. Hausleitner, I. N. Tziavos; G. S. Vergos, V. Zervakis, **X. Frantzis**, A. Tripolitsiotis, P. Partsinevelos, D. Andrikopoulos (2010). Absolute calibration of Jason satellite radar altimeters at Gavdos Cal/Val facility using independent techniques." SPIE Symposium on Remote Sensing, Paper Number: 7825-12, "Remote Sensing of the Ocean, Sea Ice, and Large Water Regions 2010", Toulouse, France.
 - Mertikas, S. P., A. Daskalakis, W. Hausleitner, I.N. Tziavos, G.S. Vergos, V. Zervakis, P. Partsinevelos, **X. Frantzis**, D. Andrikopoulos, A. Tripolitsiotis (2010). Calibration of satellite radar altimeters at Gavdos Cal/Val facility using three different methodologies, *Proceedings of European Space Agency Living Planet 2010*, Bergen, Norway, 28 Jun–2 Jul 2010.
 - Mertikas S. P., R. T. Ioannides, **X. Frantzis**, A. Tripolitsiotis, P. Partsinevelos, I. N. Tziavos , G. S. Vergos , Walter Hausleitner (2009). Recent Developments for the Estimation of the altimeter bias for the Jason-1 & 2 satellites using the dedicated calibration site at Gavdos. *SPIE Proceedings, Remote Sensing of the Ocean, Sea, Ice and Large Water Regions*, Vol. 7473, 7473 0C, doi:10.1117/12.830403.
 - Mertikas S, Palamartchouk K., **Frantzis X.** (2006). Permanent GPS sites over Crete for precise geodynamics applications, *International Global Navigation Satellite Systems Service 2006 Workshop*, 8-11 May, Darmstadt, Germany.
 - Pavlis E.C., S. P. Mertikas and the GAVDOS TEAM (2006). Eastern Mediterranean Dynamics and JASON-1 Altimeter Calibration Results from the GAVDOS Project, presented at the "The Ocean Surface Topography Science Team" (OSTST) meeting, Venice, Italy, March 16-18.
 - Mertikas, S. P. and the GAVDOS Team (2004). A Permanent Facility for Calibration/Validation of Satellite Altimetry: GAVDOS, *European Geophysical Union, 1st General Assembly, Poster Presentation*, EGU04-A-2441 April 2004, Nice, France.
 - Mertikas, S. P. and / for the GAVDOS TEAM (2002). GAVDOS: A European radar altimeter calibration and sea-level monitoring site for Jason-1 and Envisat. *European Geophysical Society XXVII General Assembly*, Nice, France, 21-26 April, 2002.
 - Mertikas, S. P. and / for the GAVDOS TEAM (2002). Procedures for Establishing an Altimetry Calibration and Sea-Level Monitoring Facility on the isle of Gavdos, Crete, Greece. *Jason-1 Science Working Team Meeting*, 10-12 June 2002, Biarritz, France.
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 - Mertikas, S. P. and / for the GAVDOS TEAM (2002). "Recent Developments in the Calibration-Validation Site of Gavdos, Greece.", Jason-1/TOPEX/Poseidon, Science Working Team (SWT) Meeting, New Orleans, Louisiana, USA, 21-23 October 2002.
 - Mertikas, S, E. Pavlis, Th. Papadopoulos, **X. Frantzis** (2001). Preparatory Steps for the establishment of a European radar altimeter calibration and sea-level monitoring site for Jason, Envisat and Euro-GLOSS, International Association of Geodesy, 2001 Scientific Assembly, 2-7 September, Budapest.
 - Topouzi, S., A. Sarris, Y. Pikoulas, S. Mertikas, **X. Frantzis**, A. Giourou (2001). Ancient Mantinea's Defense Network Reconsidered through a GIS Approach, Computer Applications and Quantitative Methods in Archeology 2001, Gotland, Sweden, 25-29 April, 2001.
 - Mertikas, S., E.C. Pavlis, A. Karaliotis, **X. Frantzis** and E. Bartzos (1998). "First observations from Crete Regional Tectonic Experiment (CRETE)", 23rd General Assembly of the European Geophysical Society in Nice, 20-24 April 1998.
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