**Greece 2.0**

**Basic Research Financing Action**

**(Horizontal support of all Sciences)**

**Sub-action 1**

**Funding New Researchers**

**PART B2.2**

# Part B2.2 Research Team Members’ CVs

**Precise oRbit dEtermination and Positioning using sAtellite doppleR obsErvations**

**PREPARE**

* **Principal Investigator** (Name/Surname): **Dimitrios Anastasiou**
* Scientific Area: SA2. Engineering Sciences & Technology
* Scientific Field: 2.1 Civil, Surveying & Architectural engineering
* Scientific Subfield: 2.1.7 Other
* Project Duration (in months): 24
* Total Budget (€): 190 000
* Host Institution: National Technical University of Athens

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| **Number** | **Name** | **Affiliation (Host Institution or Collaborating organization)** | **Brief Role in the Project** |
| 1 | Maria Tsakiri | Host Institution | Evaluation and validation of results. |
| 2 | Xanthos Papanikolaou | Host Institution | Researcher, software development, data processing |
| 3 | Vassiliki Krey | Host Institution | Researcher, software development, data processing |
| 4 | Vangelis Zacharis | Host Institution | Researcher, software development, validation of results |
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| **Member Name: Maria Tsakiri** |
| ***Current positions***  *2016-todate:* Professor, School of Rural Surveying & Geoinformatics Engineering, NTUA.  *2020 – todate:* Director ‘Dionysos Satellite Observatory’, School of Rural Surveying & Geoinformatics Engineering, NTUA.  ***Education***  *1992:* Dipl. Eng. School of Rural and Surveying Engineering, NTUA.  *1992-1995:* PhD Inst of Surveying Eng. And Space Geodesy, University of Nottingham, UK.  ***Research Experience***  2021-2023: Integrated tropospheric estimation in DORIS satellite positioning, Basic Research Grant, NTUA (Coordinator)  2020-2026: DORIS applications at Dionysos Satellite Observatory, CNES (Coordinator)  2021-2022: Long-term corrections of coordinates of the Greek Geodetic Reference System,  Hellenic Cadastre Agency (Coordinator)  2021 – 2024: ERODITE: Earth Observation Tools for the promotion of Digital Economy  Erasmus+ (Coordinator)  ***Conference participation***   | * Global Sentinel 2022, Space Program US, California USA, 24 July -3 August 2022 | | --- | | * 2022 Int. Conference on Continued, enhanced ocean altimetry and climate monitoring from space,   31 Oct.-6 Nov, 2022, Venice, Italy | | * 2022 Int. DORIS Workshop, 31 Oct.-3 Nov, 2022, Venice, Italy, | | * 5th Joint Int. Symposium on Deformation Monitoring (JISDM 2022) April 6-8, 2022, València, Spain | | * 2022 General Assembly of the European Geosciences Union (EGU), Vienna, Austria, May 23 – 27. | | * 2020 General Assembly of the European Geosciences Union (EGU), Vienna, Austria, May 4-8 (online) | | * FIG Working Week 2021, June 20-25, Amsterdam. Netherlands (online) | | * Int. Symposium on Applied Geoinformatics (ISAG2021), 2-3 December, Riga, Latvia(online) | | * 2019 General Assembly of the European Geosciences Union (EGU), Vienna, Austria, April 07 – 12. |   ***Publications (relevant to project)***   * Zacharis V, M. Tsichlaki, X. Papanikolaou, M. Tsakiri (2022) Validating DORIS Meteo Data. Proc. 2022 IDS Workshop, 31 Oct. -3 Nov., Venice, Italy * Papanikolaou, X., V. Zacharis, M. Tsichlaki, S.Nahmani, A.Pollet, V M. Tsakiri, J.Galanis (2022) Development of an in-house DORIS processing software. Proc. 2022 IDS Workshop, 31 Oct. -3 Nov., Venice, Italy * Papanikolaou,X. M. Tsakiri, S. Nahmani, A. Pollet (2022). Designing a DORIS processing software for orbit determination and estimation of geodetic parameters.Proc. IAG Int. Symposium on Reference Frames for Applications in Geosciences (REFAG 2022), Thessaloniki, Greece, October 17-20 * Anastasiou,D., X. Papanikolaou, M. Tsakiri (2022) On the stability of regional reference frames in Greece using GNSS permanent stations. Proc. IAG International Symposium on Reference Frames for Applications in Geosciences (REFAG 2022), Thessaloniki, Greece, October 17-20, 2022 * Flokos N. and Tsakiri M. (2021): Improved SAR Altimetry Techniques in Coastal Island Areas, EGU General Assembly 2021, online, 19–30 Apr 2021, EGU21-8942, https://doi.org/10.5194/egusphere-egu21-8942, 2021. * Flokos N. and Tsakiri M. (2020): Observing Sea Level Changes Using Satellite Altimetry and In Situ Data, EGU General Assembly 2020, Online, 4–8 May 2020, EGU2020-5817, https://doi.org/10.5194/egusphere-egu2020-5817, 2020 |

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| **Member Name: Xanthos Papanikolaou** |
| Xanthos Papanikolaou received his diploma from the School of Rural, Surveying & Geoinformatics Engineering, of the National Technical University of Athens in 2009. Since then, he has been working as an external researcher / research ascossiate, involved mainly in Satellite Geodesy, Precise Orbit Determination and GPS/GNSS data acquisition, management and processing, collaborating with various institutions such as the National Technical University of Athens, the Institute for Astronomy, Astrophysics, Space Applications and Remote Sensing and the Geodynamic Institute of the National Observatory of Athens.  He is also a PhD candidate in the School of Rural, Surveying & Geoinformatics Engineering, of the National Technical University of Athens, currently fulfilling his thesis entitled "Methodology for orbit determination using DORIS RINEX data".  His area of expertise is Satellite Geodesy and Navigation and his research interests include big data management and acquisition, Global Navigation Satellite Ssystems (GNSS) data processing, Doppler Orbitography and Radiopositioning Integrated by Satellite (DORIS) analysis, Orbit Determination, time-series analysis and computational mathematics. He has provided teaching assistance in the fields of Satellite Geodesy and Theory of Errors and Adjustment (int NTUA) and has a strong programming background and solid knowledge of English and German.   * Papanikolaou, X., V. Zacharis, M. Tsichlaki, S.Nahmani, A.Pollet, V M. Tsakiri, J.Galanis (2022) Development of an in-house DORIS processing software. Proc. 2022 IDS Workshop, 31 Oct. -3 Nov., Venice, Italy * Spectroscopic analysis tool for intEgraL fieLd unIt daTacubEs (satellite): case studies of NGC 7009 and NGC 6778 with MUSE, Akras S., Monteiro H., Walsh J. R., García-Rojas J., Aleman I., Boffin H., Boumis P., Chiotellis A., Corradi R.M.L., Gonçalves D.R., Gutiérrez-Soto L.A., Jones D., Morisset C., Papanikolaou X., Monthly Notices of the Royal Astronomical Society, Volume 512, Issue 2, May 2022, Pages 2202-2221, <https://arxiv.org/abs/2203.06175> * NOANET: A continuously operating GNSS network for solid-earth sciences in Greece, Chousianitis K., Papanikolaou X., Drakatos G., Tselentis G-A.}, Seismological Research Letters 2021;; 92 (3): 2050-2064, <https://doi.org/10.1785/0220200340> * Regional integration of long-term national dense GNSS network solutions, Kenyeres A., Bellet J. G., Bruyninx C., Caporali A., de Doncker F., Droscak B., Duret A., Franke P., Georgiev I., Bingley R., Huisman L., Jivall L., Khoda O., * Kollo K., Kurt A. I., Lahtinen S., Legrand J., Magyar B., Mesmaker D., Morozova K., Naigl J., Azdemir S., Papanikolaou X., Parseliunas E., Stangl G., Ryczywolski M., Tangen O. B., Valdes M., Zurutuza J., Weber M., GPS Solutions 23, 122 (2019), <https://doi.org/10.1007/s10291-019-0902-7> * The 2008 Methoni earthquake sequence: the relationship between the earthquake cycle on the subduction interface and coastal uplift in SW Greece, Howell A., Palamartchouk K., Papanikolaou X., Paradissis D., Raptakis C., Copley A., England P. and Jackson J., Geophysical Journal International, <https://doi.org/10.1093/gji/ggw426> * From quiescence to unrest : 20 years of satellite geodetic measurements at Santorini volcano, Greece, Parks MM, Moore JDP, Papanikolaou X, Biggs J, Mather TA, Pyle DM, Raptakis C, Paradissis D, Hooper A, Parsons B, and Nomikou, P, Journal of Geophysical Research: Solid Earth, Vol. 120, No. 2, 01.01.2015, p. 1309-1328, <http://dx.doi.org/10.1002/2014JB011540> * Joint approach using satellite techniques for slope instability detection and monitoring, Drakatos G., Paradissis P., Anastasiou D., Elias P., Marinou A., Chousianitis K., Papanikolaou X., Zacharis V., Argyrakis P., Papazissi K. and Makropoulos K., International Journal of Remote Sensing, 34:6, 1879-1892, <https://doi.org/10.1080/2150704X.2012.731089> * Mapping inflation at Santorini volcano, Greece, using GPS and InSAR, Papoutsis, I., X. Papanikolaou, M. Floyd, K. H. Ji, C. Kontoes, D. Paradissis, and V. Zacharis, Geophys. Res. Lett., <https://doi.org/10.1029/2012GL054137> * Evolution of Santorini Volcano dominated by episodic and rapid fluxes of melt from depth, M. M. Parks, J. Biggs, P. England, T. A. Mather, P. Nomikou, K. Palamartchouk, X. Papanikolaou, D. Paradissis, B. Parsons, D. M. Pyle, C. Raptakis and V. Zacharis, Nature Geoscience (Advance Online Publication), <https://www.nature.com/articles/ngeo1562> |

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| **Member Name: Vassiliki Krey** |
| Place and Date of Birth: Switzerland, January 19, 1996  Dionysos Satellite Observatory, Department of Topography  School of Rural Surveying and Geoinformatics Engineering  National Technical University of Athens, H.Polytehniou Street, Zografos Campus, Athens 15780, Greece  🕾: +30 2107715753 🖃:vasiliki\_krey@mail.ntua.gr  **1. Education**  *03/2022:* Dipl. Eng. School of Rural, Surveying and Geoinformatics Engineering, Faculty of Engineering, NTUA.  *06/2022 –to date:* PhD Candidate, School of Rural, Surveying and Geoinformatics Engineering, Faculty of Engineering, NTUA.  **2. Research experience**  *06/2021-03/2022:* Diploma Thesis « Development of a method for the detection of secondary seismic waves on data of continuously operating GNSS stations. »  **3. Areas of Research and Expertise**  Satellite Geodesy, Deformation Monitoring, Satellite Orbit Determination and Analysis  **4. Publications**  Krey V., Galanis I., Zacharis V. and Tsakiri M. (2022): S-Wave detection using continuously operated GNSS stations: A case study of two Mw 7.1 earthquake events, 5th JISDM, 20-22 June 2022, Valencia, Spain  **5. Conference Participation**  *20-22/06/2022* 5th Joint International Symposium on Deformation Monitoring, Valencia Spain  *16-27/05/2021* Online Space Debris Training Course 2021 – European Space Agency, online  *02-17/07/2020* 2020 Mediterranean Sea Online Training Workshop – Copernicus Marine Service of the European Commission, online |

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| **Member Name: Vangelis Zacharis** |
| National Technical University of Athens School of Rural, Surveying and Geoinformatics Engineering 9 Iroon Polytechneiou str, 157 80, Zografos, Greece +30 210 772 2754, +30 697 986 2739 | [vanzach@mail.ntua.gr](mailto:vanzach@mail.ntua.gr)  **Position**  Researcher, Dionysos Satellite Observatory  **Work Experience**   * Employed at the School of RSGE since 2001 * Surveying Engineer since 1994   **Education and Training**   * PhD student at the School of Rural, Surveying and Geoinformatics Engineering, NTUA (currently) * Dipl-Ing. Rural & Surveying Engineering, NTUA (1994)   **Professional profile and expertise**  Generic activities   * Teaching assistant on geodetic topics at pre- and post- graduate level * S/W development and fast algorithm prototyping, mostly on geodetic applications, systems interconnection, visualization, etc.   Current activities   * Junior tutor on the field of geodesy * Junior researcher on geodesy, atmospheric studies, signal processing   Research interests   * Geodesy | Atmosphere | Signal processing | Problem solving   Previous involvement in EU projects   * Erasmus+ Curricula Enrichment delivered through the Application of Location-based Services to Intelligent Transport Systems–LBS2ITS   618657-EPP-1-2020-1-AT-EPPKA2-CBHE-JP EU 15 Jan 2021 – 14 Jan 2024  Publications   * Zacharis V, M. Tsichlaki, X. Papanikolaou, M. Tsakiri (2022) Validating DORIS Meteo Data. Proc. 2022 IDS Workshop, 31 Oct. -3 Nov., Venice, Italy * Papanikolaou, X., V. Zacharis, M. Tsichlaki, S.Nahmani, A.Pollet, V M. Tsakiri, J.Galanis (2022) Development of an in-house DORIS processing software. Proc. 2022 IDS Workshop, 31 Oct. -3 Nov., Venice, Italy * Hloupis, G. and Pagounis, V. and Tsakiri, M. and Doxastakis, G. and Zacharis, V., Low-cost warning system for the monitoring of the Corinth Canal, Applied Geomatics, vol. 9, 4, p. 263–277, 2017, doi:10.1007/s12518-017-0196-9 * Andritsanos, V. D. and Arabatzi, O. and Gianniou, M. and Pagounis, V. and Tziavos, I. N. and Vergos, G. S. and Zacharis, E., Comparison of Various GPS Processing Solutions toward an Efficient Validation of the Hellenic Vertical Network: The ELEVATION Project, Journal of Surveying Engineering, vol. 142, 1, 2016, doi:10.1061/(ASCE)SU.1943-5428.0000164 * Papoutsis, I. and Papanikolaou, X. and Floyd, M. and Ji, K. H. and Kontoes, C. and Paradissis, D. and Zacharis, V., Mapping inflation at Santorini volcano, Greece, using GPS and InSAR, Geophysical Research Letters, vol. 40, 2, p. 267–272, 2013, doi:10.1029/2012GL054137 * Parks, M. M. and Biggs, J. and England, P. and Mather, T. A. and Nomikou, P. and Palamartchouk, K. and Papanikolaou, X. and Paradissis, D. and Parsons, B. and Pyle, D. M. and Raptakis, C. and Zacharis, V., Evolution of Santorini Volcano dominated by episodic and rapid fluxes of melt from depth, Nature Geoscience, vol. 5, p. 749–754, 2012, doi:10.1038/ngeo1562 |