**Greece 2.0**

**Basic Research Financing Action**

**(Horizontal support of all Sciences)**

**Sub-action 1**

**Funding New Researchers**

**PART B1**

# Part B1 PI Curriculum Vitae & Scientific Achievements

**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

## curriculum vitae

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| **Personal Information** | |
| **SURNAME** | ANASTASIOU |
| **name** | DIMITRIOS |
| **e-mail** | [danastasiou@mail.ntua.gr](mailto:danastasiou@mail.ntua.gr) |
| **tel.** | 6947418554 |

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| **CURRENT POSITION(S)** | |
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| **2022 - …** | **Assistant Professor**  School of Rural, Surveying and Geoinformatics Engineering/Department of Topography, National Technical University of Athens, Greece |

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| **PREVIOUS POSITION(S)** | |
|  | |
| **2017 - 2022** | **Adjunct Lecturer**  Department of Surveying and Geoinformatics Engineering, University of West Attica, Greece |
| **2021 - 2022** | **External Researcher**  Earthquake Planning and Protection Organization, Greece |
| **2021 - 2022** | **External Researcher**  PROION Project, National Observatory of Athens, Greece |
| **2019 - 2020** | **External Researcher**  School of Rural and Surveying Engineering, Aristotle University of Thessaloniki, Greece |
| **2018 - 2019** | **External Researcher**  EPOS-IP Project, National Observatory of Athens, Greece |
| **2010 - 2017** | **Teaching Assistant**  School of Rural, Surveying and Geoinformatics Engineering/Department of Topography, National Technical University of Athens, Greece |
| **2010 - 2017** | **Doctoral Researcher**  School of Rural, Surveying and Geoinformatics Engineering/Department of Topography, National Technical University of Athens, Greece |
| **2012 – 2015** | **External Researcher**  Department of Geology, University of Patras, Greece |
| **2010 – 2012** | **External Researcher**  Technical Educational Institute of Athens, Greece |

| **EDUCATION** | |
| --- | --- |
| **2010 - 2017** | School of Rural and Surveying Engineering, National Technical University of Athens, Greece, Thesis title: “Terrestrial and satellite geodetic data analysis for estimation of crustal deformation”, Doctor of Philosophy in Engineering |
| **2003 - 2009** | School of Rural and Surveying Engineering, National Technical University of Athens, Greece, Thesis title: “Study of tectonic shifts in the Ionian Islands region from GPS time series analysis”, Diploma |

| **PUBLICATIONS** |
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| * Pagounis V., Merlemis N., Anastasiou D., Arabatzi O., Zacharis V., Tsakiri M. (2022). Compact testing of total station instruments using folded optics. *Journal of Applied Engineering sciences. Vol. 12(25), issue 1/2022, Art.No 331 pp.71-76* DOI: [10.2478/jaes-2022-0011](http://dx.doi.org/10.2478/jaes-2022-0011) |
| * Anastasiou D., Papanikolaou X., Ganas A., Paradissis D., (2018). StrainWebTool: A web application to estimate strain tensor parameters (v1.0b1). Zenodo. DOI: [10.5281/zenodo.3308499](https://doi.org/10.5281/zenodo.3308499) |
| * Anastasiou D., Papanikolaou X., Ganas A., Paradissis D., (2018). StrainTool: A software package to estimate strain tensor parameters (v1.0). Zenodo. DOI: [10.5281/zenodo.1297565](https://doi.org/10.5281/zenodo.1297565) |
| * Drakatos G., Paradissis P., Anastasiou D., Elias P., Marinou A., Chousianitis K., Papanikolaou X., Zacharis V., Argyrakis P., Papazissi K. and Makropoulos K. (2013). Joint approach using satellite techniques for slope instability detection and monitoring, International Journal of Remote Sensing, 34:6, 1879-1892. DOI: [10.1080/2150704X.2012.731089](http://dx.doi.org/10.1080/2150704X.2012.731089%7d%7b10.1080/2150704X.2012.731089) |
| * *Mitsakaki C., Rondoyanni Th., Anastasiou D., Papazissi K., Marinou A., Sakellariou M. (2013). Static stress changes and fault interactions in the Lefkada Island (Ionian Islands-Greece). Journal of Geodynamics 67, 53–61. DOI:1*[*0.1016/j.jog.2012.04.007*](http://dx.doi.org/10.1016/j.jog.2012.04.007) |
| * Ganas A., Marinou A., Anastasiou D., Paradissis D., Papazissi K., Tzavaras P. and Drakatos G. (2013). GPS-derived estimates of crustal deformation in the central and North Ionian Sea, Greece: 3-yr results from NOANET continuous network data. Journal of Geodynamics 67, Pages 62–71A, DOI:[10.1016/j.jog.2012.05.010](http://dx.doi.org/10.1016/j.jog.2012.05.010) |
| * Ganas A., Karamitros I., Mavropoulos G., Anastasiou D., Athanassopoulos T., Nikolakopoulos K., Kyriou A., Kontopoulos C., Charalampopoulou V., Tsironi V., (2022). A new low-cost GNSS and strong motion instrument for monitoring of slopes and critical infrastructures within the Greek “Supersite”. Safe Thessaloniki 2022 – new technologies and civil protection. 29/9-1/10/2022. |
| * Marinou A., Anastasiou D., Papanikolaou X., Paradissis D and Zacharis V. (2016). Dionysos Satellite Observatory and Higher Geodesy Laboratory: History amd Perspectives. EGE2016: 14th International Conference of the Geological Society of Greece. Thessaloniki, Greece, May 25 - 27. |
| * Anastasiou D., Papanikolaou X., Kapetanidis V., Tsironi V., Ganas A. and Paradissis D. (2019) STRAINTOOL - Improving the mapping of tectonic strain in Eurasia. 12th HSTAM International Congress on Mechanics, Thessaloniki, Greece, 22-25 September |
| * Anastasiou D., Ganas A, Legrand J., Bruyninx C., Papanikolaou X., Tsironi V., Kapetanidis V. (2019). Tectonic Strain distribution over Europe from EPN data. EGU General Assembly 2019, Geophysical Research Abstracts, Vol. 21, EGU2019-17744-1 |
| * Papanikolaou X., Anastasiou D., Paradissis D. (2017). DSO contribution to EUREF densification; status and future steps. EUREF Analysis Center Workshop 2017, Royal Observatory of Belgium, Brussels, Belgium. 25-26 October. |
| * Anastasiou D., Papanikolaou X., Marinou A., Zacharis Z., Alatza S., Paradissis D. (2015). GNSS processing at DSO: recent activity and current status EUREF Analysis Center Workshop 2015, Astronomical Institute, University of Bern, Switzerland. 14-15 October. |
| * Papanikolaou X., Anastasiou D., Zacharis V., Marinou A., Tita E., Paradissis D. (2015). Planning DSO Contribution to EUREF Densification EUREF Analysis Center Workshop 2015, Astronomical Institute, University of Bern, Switzerland. 14-15 October. |
| * Anastasiou D., Chouliaras G., Papanikolaou X., Marinou A., Zacharis V., Galanis J., Drakatos G., Paradissis D. (2015) Geodetic and seismological analysis of the January 26, 2014 Cephalonia Island earthquake sequence. 26th General Assembly of the IUGG,Prague, Czech Republic, 22/6 - 2/7. |
| * Papanikolaou X., Anastasiou D., Marinou A., Zacharis V., Paradissis D. (2015). Routine analysis of GNSS stations in South Aegean: Processing scheme, results and dissemination of products and data. 26th General Assembly of the IUGG,Prague, Czech Republic, 22/6 - 2/7. |
| * Paradissis D., Drakatos G., Marinou A., Anastasiou D., Alatza S., Zacharis V., Papanikolaou X., Melis N., Kalogeras I., Chouliaras G., Evangelidis C., and Makropoulos K. (2015). South Aegean geodynamic and tsunami monitoring platform project: Preliminary results 26th General Assembly of the IUGG,Prague, Czech Republic, 22/6 - 2/7. |
| * Papanikolaou X., Anastasiou D., Marinou A., Zacharis V., and Paradissis D. (2015). Routine Analysis of all available GNSS Stations in Greece: Processing Scheme and Dissemination of Products and Data. EGU General Assembly 2015,Geophysical Research Abstracts, Vol. 17, EGU2015-5745-2. |
| * Zacharis V., Paradissis D., Drakatos G., Marinou A., Melis N., Anastasiou D., Alatza S., and Papanikolaou X. (2015). Monitoring sea level fluctuation in South Aegean. EGU General Assembly 2015,Geophysical Research Abstracts, Vol. 17, EGU2015-6397 |
| * Papoutsis I., Papanikolaou X., Floyd M., Ji K.H., Kontoes C., Paradissis D., Anastasiou D., and Ganas A. (2013). The Santorini Inflation Episode, Monitored by InSAR and GPS. European Space Agency Living Planet Symposium, Sept. 2013, Edinburgh, UK. |

| **CONFERENCES/WORKSHOPS/etc** |
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| * 2022 Multi-GNSS Precise Point Positioning and Pride PPP-AR short course. 21-23 September 2022. UNAVCO * ERASMUS+ ICM. Visiting and holding lectures at the School of Architecture, Planning and Geomatics. 27/6 - 2/7/2022 * ERASMUS+ ICM. Visiting and holding lectures at the School of Architectural Engineering of the University of Pristina, Mitrovica, Kosovo. 16 - 21/05/2022 * ERASMUS+ ICM. Visiting and holding lectures at the School of Architectural Engineering of the University of Pristina, Mitrovica, Kosovo. 14 - 19/11/2021 * 2021 short course: GNSS Interferometric Reflectometry. 6-21 October 2021.UNAVCO. * 2nd Remote Sensing and Space Applications Meeting, National Research Foundation, Athens, February 26, 2020. * Conference of the Association of Architects of Pieria "Architecture: heritage, uses, society" Katerini, Pieria, October 7, 2019 * 9th Conference NTUA and MIRC ”Vision, planning and policies for the integrated development of mountainous and isolated regions”, Metsovo, Greece, 26-28 September 2019. * 12th HSTAM International Congress on Mechanics, Thessaloniki, Greece, 22-25 September 2019 * EUREF Analysis Center Workshop 2017, 25-26 October 2017, Royal Observatory of Belgium, Brussels, Belgium. * EGE2016: 14th International Conference of the Geological Society of Greece, 25-27 May 2016, Thessaloniki, Greece. * EUREF Analysis Center Workshop 2015, 14-15 October 2015, Astronomical Institute, University of Bern, Switzerland. * 26th General Assembly of the IUGG, 22/6 – 2/7 2015, Prague, Czech Republic. * The Volcanic and Geodynamic Field of the South Aegean, International Workshop, 20-22 May 2015,Santorini, Greece. * EGU General Assembly 2015, 12-17 April 2015, Vienna, Austria. * 4o National Cnference of Rural and Survey Engineers, 25-27 September 2014, Thessaloniki, Greece. * EUREF 2014 Symposium, 3-7 June 2014, Vilnius, Lithuania. * 2nd Meeting of Tectonic Geodesy, 14 May 2014, Athens, Greece * FIG Commission 3 Workshop 2012 Spatial Information, Informal Development, Property and Housing, 10-14 December 2012, Athens, Greece. * 1st Meeting of Tectonic Geodesy, 25 January 2012, Athens. * 3rd National Cnference of Rural and Survey Engineers, 17-18 December 2010, Athens. * 15th General Assembly of Wegener, 14-17 September 2010, Istanbul, Turkey. * IAG School on Reference Frame, June 7-12, 2010, Mytilene, Lesvos, Greece. * 2nd International Workshop “Advances in understanding crustal deformation in SE Europe using GNSSystems”, 20-21 November 2009, Nevrokopi, Eastern Macedonia, Greece. * International Technical Laser Workshop on SLR Tracking of GNSS Constellations, 14-19 September 2009, Metsovo, Greece |

| **MEMBERSHIPS & REVIEWING ACTIVITIES** *(if applicable)* | |
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| **2022 -…** | Reviewer at Scientific Journal: International Association of Geodesy Symposia |
| **2020 -…** | Reviewer at Scientific Journal: GPS Solutions |
| **2020 – …** | Reviewer at Scientific Journal: Sensors, Special Issue “ State-of-the-Art Sensors Technology in Greece 2020-2021 |
| **2022-…** | Membership: International Association of Geodesy (RN: 682) |
| **2019** | Membership: European Geoscience Union ( EGU) (RN:162317) |
| **2013 - …** | Professional Register (RN:25123/6-12-2013) for Transportation projects planning (category 10) and Surveying projects planning (category 16) |
| **2009 - …** | Technical Chamber of Greece (TEE-TCG) (RN:122495) |
| **2009 - …** | Hellenic Association of Rural and Surveying Engineers |

| **teaching activities** | |
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| **2022 - …** | Assistant Professor – Satellite Geodesy and Navigation, National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering, Greece |
| **2022 - …** | Assistant Professor – Marine Geodesy, National Technical University of Athens, School of Rural, Surveying and Geoinformatics Engineering, Greece |
| **2021 - 2022** | Adjunct Lecturer – Topographic Networks and Calculations, University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |
| **2019 - 2022** | Adjunct Lecturer – Error Theory and observation adjustment II, University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |
| **2019 – 2021** | Adjunct Lecturer – Reference Systems and time, University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |
| **2017 - 2022** | Adjunct Lecturer – Great field work in geodesy, University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |
| **2018 - 2019** | Teaching Assistant – Geometric documentation of monuments and ensembles (M.Sc.), University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |
| **2017 - 2018** | Teaching Assistant – Cutting-edge technologies in Geodesy and Topography (M.Sc.), University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |
| **2010 - 2017** | Teaching Assistant – Satellite Geodesy/Application in Satellite Geodesy/ Great field work in Satellite Geodesy, National Technical University of Athens, School of Rural and Surveying Engineering, Greece |

| **SUPERVISION OF GRADUATE STUDENTS & POSTODOCTORAL FELLOWS** | |
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| **2021 - 2022** | Supervision of Diploma Thesis: 3  University of West Attica, Department of Surveying and Geoinformatics Engineering, Greece |

| **FELLOWSHIPS and AWARDS** | |
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| **2003** | - A’ praise in the 63rd Panhellenic competition in Mathematics of HMS ”THALES”, ”EUCLEIDIS” and - participation in the National Mathematical Olympiad ”ARCHIMEDES”. |
| **2002** | 3rd award in the 62nd Panhellenic competition in Mathematics of HMS ”THALES” and ”EUCLEIDIS”. |
| **2001** | - 2nd award in the 61st Panhellenic competition in Mathematics of HMS ”THALES” and ”EUCLEIDIS”. - Participation in the National Mathematical Olympiad ”ARCHIMEDES” |
| **2000** | - Praise in the 60th Panhellenic competition in Mathematics of HMS ”THALES” and ”EUCLEIDIS”. - Participation in the National Mathematical Olympiad ”ARCHIMEDES”. |
| **1999** | - 3rd award in the 62nd Panhellenic competition in Mathematics of HMS ”THALES” and ”EUCLEIDIS”. - Participation in the National Mathematical Olympiad ”ARCHIMEDES”. |

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| **RESEARCH GRANTS** | | | |
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| **Project Title** | **Funding source** | **Period** | **Role of the PI** |
| PROION – Multiparametric monitoring platform using microsensors for Enceladus Hellenic Supersite | EU/National funds | 15.11.2021 – 17.08.2022 | Research fellow |
| Estimation of surface deformations using GNSS data analysis in the Gulf of Corinth | Earthquake Planning and Protection Organization | 14.07.2021 – 14.07.2022 | Principal Investigator |
| PROTEAS II – Advanced space applications for space and earth exploration | EU/National funds | 01.05.2021 – 31.07.2021 | Research fellow |
| ModernGravNet – Modernization of the Hellenic Gravity Network | EU/National funds | 15.11.2019 – 30.09.2020 | Research fellow |
| EPOS – IP | EU/H2020 | 01.11.2018 – 30.06.2019 | Research fellow |
| SEISMO – South Aegean Geodynamic and Tsunami Monitoring Platform | EU/National funds | 19.02.2014 – 31.10.2018 | Member of research team |
| LAVMO – Landslide Vulnerability Model | EU/National funds | 01.07.2012 – 30.11.2015 | External Researcher |
| THE ELEVETION project – Validation and quality control of the Hellenic vertical network in the context of the consolidation of the European reference and control systems | EU/National funds | 01.03.2012 – 30.11.2015 | Research fellow |
| Processing and analysing GPS data, Santorini Island | Earthquake Planning and Protection Organization | 01.09.2011 – 31.12.2013 | Research fellow |
| System Development on Monitoring Slope Stability for the Prevention of Landslides and Training of Local Public Authorities in the Region of Peloponnisos | EEA Financial Mechanism and National Funds | 01.07.2010 – 31.08.2012 | External researcher |

## scientific achievements

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| Through my doctoral dissertation and the various research projects I have been involved in, I have gained an in-depth, thorough knowledge and understanding of the complicated geodetic data analysis methodologies, both for terrestrial and space geodetic methods. Via my scientific activity, I aim to improve and drive forward such methodologies and challenge current limitations. I have designed and implemented a software package for the analysis of both GNSS based and terrestrial geodetic data and estimation of strain tensors. I have years of experience in processing large datasets from continuous GNSS networks, for high-accuracy applications (e.g. tectonic and geophysical studies) using state-of-the-art software suites (e.g. Bernese GNSS Software). Such demanding tasks require extensive programming and system administrative skills. Furthermore, I have been involved in high-rate (>=1Hz) GNSS data processing studies, mainly to estimate post-seismic crustal deformation effects (e.g. Cephalonia earthquake sequence in 2014) and time series analysis. Lately I have been involved in the development of a low-cost GNSS system and in the development of software for data management and processing. |