

## Curriculum Vitae

<b>Last Name</b>	Gianniou
<b>Name</b>	Michail
<b>Place of birth</b>	Athens, Greece
<b>Sex</b>	Male
<b>Year of birth</b>	1970
<b>Languages</b>	Greek (native), German (excellent), English (very good)
<b>Current Position</b>	Professor, Department of Surveying and Geoinformatics Engineering, University of West Attica
<b>Research Areas</b>	Geodetic satellite positioning, GNSS CORS Networks, Geodetic reference systems, Monitoring of crustal deformations with GNSS

### 1. EDUCATION

1987 - 1992	Rural and Surveying Engineer - Aristotle University of Thessaloniki
1993 - 1996	Ph.D. in Satellite Surveying, University of Darmstadt, Germany

### 2. PUBLICATIONS – RESEARCH ACTIVITIES

#### 2.1 THESES

**Gianniou, M.** (1992): "The Use of Kalman Filter in the Hydrographical Positioning with GPS (Global Positioning System)", in Greek, Diploma - Thesis, Department of Geodesy and Surveying, School of Rural and Surveying Engineering, Aristotle University of Thessaloniki

**Gianniou, M.** (1996): "Genauigkeitssteigerung bei kurzzeit-statischen und kinematischen Satellitenmessungen bis hin zur Echtzeitanwendung", Deutsche Geodätische Kommission, Reihe C, Dissertationen, Heft Nr. 458, München.

#### 2.1 SELECTED PUBLICATIONS

Mouslopoulou, V., G. M. Bocchini, S. Cesca, V. Saltogianni, J. Bedford, G. Petersen, M. **Gianniou**, O. Oncken (2020): "Earthquake swarms, slow slip and fault interactions at the western-end of the Hellenic subduction system precede the moment Mw 6.9 Zakynthos earthquake, Greece". *Geochemistry, Geophysics, Geosystems*, 21, e2020GC009243

Saltogianni, V., V. Mouslopoulou, O. Oncken, A. Nicol, M. **Gianniou**, S. Mertikas (2020): "Persistent earthquake-rupture segmentation due to variable interseismic slip accumulation

within the southern Hellenic subduction plate-interface zone in Greece”, *Geophysical Research Abstracts*, Vol. 20, EGU20200-4857, 2020.

**Gianniou, M., E. Mitropoulou, D. Mastoris (2019):** “On the role of the length of GPS time-series in the accuracy of tectonic velocities' estimation: Examples from the HEPOS network”, 4th Joint International Symposium on Deformation Monitoring (JISDM), 15-17 May 2019, Athens, Greece.

**Gianniou, M., D. Mastoris (2018):** “National Report of Greece to EUREF 2018”, EUREF 2018 Symposium, May 30 – June 1 2018, Amsterdam, Holland.

Taymaz T., V. Saltogianni, S. Yolsal-Çevikbilen, M. **Gianniou**, T. Öcalan, T. Eken, and S. Stiros (2018): “The 2017 Lesvos (Greece) Mw6.3 earthquake: Normal faulting in the Aegean Sea”, *Geophysical Research Abstracts*, Vol. 20, EGU2018-5346, 2018.

Saltogianni, V., T. Taymaz, S. Yolsal-Çevikbilen, T. Eken, M. **Gianniou**, T. Öcalan, S. Pytharouli, and S. Stiros (2018): “Geodetic and Seismological analysis of the 2017 Kos-Bodrum Mw 6.5 earthquake (SE Aegean Sea) provides evidence for the evolution of normal faulting in Gökova graben”, *Geophysical Research Abstracts*, Vol. 20, EGU2018-5335, 2018.

**Gianniou, M., E. Mitropoulou, D. Mastoris (2017):** “National Report of Greece to EUREF 2017”, EUREF 2017 Symposium, May 17-19 2017, Wroclaw, Poland.

Saltogianni, V., M. **Gianniou**, F. Moschas, and S. Stiros (2016): “Pattern of dynamic displacements in a strike-slip earthquake”, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL069507.

Chousianitis, K., A. O. Konca, G.-A. Tselentis, G. A. Papadopoulos, M. **Gianniou** (2016): “Slip model of the 17 November 2015 Mw = 6.5 Lefkada earthquake from the joint inversion of geodetic and seismic data”, *Geophys. Res. Lett.*, 43, doi:10.1002/2016GL069764.

**Gianniou, M., E. Mitropoulou, D. Mastoris (2016):** “National Report of Greece to EUREF 2016”, EUREF 2016 Symposium, May 25-27 2016, San Sebastian, Spain.

**Gianniou, M., I. Stavropoulou (2016):** “Estimation of tectonic velocities using GPS Precise Point Positioning: The case of Hellenic RTK network HEPOS”, EUREF 2016 Symposium, May 25-27 2016, San Sebastian, Spain.

Saltogianni V., M. **Gianniou**, T. Taymaz, S. Yolsal-Çevikbilen, and S. Stiros (2016): “The 2014 Mw 6.9 north Aegean trough (NAT) earthquake: seismological and geodetic evidence”, *Bulletin of the Geological Society of Greece*, vol. L, 2016. Proceedings of the 14th International Conference, Thessaloniki, May 2016.

Bruyninx, C., Z. Altamimi, E. Brockmann, A. Caporali, R. Dach, J. Dousa, R. Fernandes, M. **Gianniou**, H. Habrich, J. Ihde, L. Jivall, A. Kenyeres, M. Lidberg, R. Pacione, M. Poutanen, K. Szafrank, W. Söhne, G. Stangl, J. Torres, C. Völksen (2015): “Implementation of the ETRS89 in Europe: Current Status and Challenges”, *International Association of Geodesy Symposia*, DOI 10.1007/1345\_2015\_130, Springer Verlag, pp. 1-11

- Kenyeres, A. A. Caporali, T. Horvath, A. Baron, F. Doncker, B. Droscak, A. Duret, P. Franke, I. Georgiev, **M. Gianniu**, D. Hansen, L. Huisman, K. Morozova, J. Nagl, P. Pihlak, G. Stangl, M. Valdes, M. Ryczywolski and J. Zurutuza, (2015): “Global Reference Frame Realization on National Level Based on the Integration of National CORS Networks”, *2015 AGU Fall Meeting*, San Francisco, 14-18 December 2015.
- Saltogianni V., **M. Gianniu**, T. Taymaz, S. Yolsal-Çevikbilen, and S. Stiros (2015): “Fault-Slip Source Models for the 2014 Mw 6.9 Samothraki-Gökçeada Earthquake (North Aegean Trough) Combining Geodetic and Seismological Observations”. *Journal of Geophysical Research Solid Earth*, 120, 8610–8622, doi:10.1002/2015JB012052.
- Andritsanos V. D., O. Arabatzi, **M. Gianniu**, V. Pagounis, I. N. Tziavos, G. S. Vergos, E. Zacharis (2015): “Comparison of various GPS processing solutions towards an efficient validation of the Hellenic vertical network: The E.LE.V.A.T.I.ON project”. *Journal of Surveying Engineering*, Feb 2016, Vol. 142, No. 1.
- Bruyninx, C., Z. Altamimi, E. Brockmann, A. Caporali, R. Dach, J. Dousa, R. Fernandes, **M. Gianniu**, H. Habrich, J. Ihde, L. Jivall, A. Kenyeres, M. Lidberg, R. Pacione, M. Poutanen, K. Szafranek, W. Söhne, G. Stangl, J. Torres, C. Völksen (2015): “Implementation of the ETRS89 in Europe: Current Status and Challenges”, *International Association of Geodesy Symposia*, DOI 10.1007/1345\_2015\_130, Springer Verlag, pp. 1-11.
- Andritsanos V. D., **M. Gianniu**, V. Pagounis, M. Tsakiri (2015): “3D Heritage Recording using Terrestrial Laser Scanning Techniques”, International Conference ‘*Science in Technology*’ SCinTE 2015, 5-7 November, Athens, Greece.
- Andritsanos V.D., **M. Gianniu**, D. Vassilaki (2015): “Effect of the transformation between global and national geodetic reference systems on GCPs and CPs accuracy”, *35th EARSeL Symposium – European Remote Sensing: Progress, Challenges and Opportunities*, June 15-18, 2015, Stockholm, Sweden.
- Gianniu**, M., E. Mitropoulou, D. Mastoris (2015): “National Report of Greece to EUREF 2015”, EUREF 2015 Symposium, June 3-5 2015, Leipzig, Germany.
- Gianniu**, M. (2015): “Realizing a geodetic reference frame using GNSS in the presence of crustal deformations: The case of Greece”, EUREF 2015 Symposium, June 3-5 2015, Leipzig, Germany.
- Saltogianni V., **M. Gianniu**, S. Yolsal-Çevikbilen), T. Eken, T. Taymaz and Stathis Stiros (2015): “Seismological and Geodetic Modeling of the 2014, Mw 6.8 Earthquake of North Aegean Trough)”, *Geophysical Research Abstracts*, Vol. 17, EGU2015-4839, 2015.
- Mouslopoulou, V., V. Saltogianni, **M. Gianniu**, S. Stiros (2014): “Geodetic evidence for tectonic activity on the Strymon Fault System, northeast Greece”. *Tectonophysics* 633, 246-255.
- Gianniu**, M., D. Mastoris, E. Mitropoulou (2014): “National Report of Greece to EUREF 2014”, EUREF 2014 Symposium, June 3-7 2014, Vilnius, Lithuania.

- Gianniou, M.** (2014): “Observing co-seismic displacements using 1-Hz data from a network of reference stations: a comparison of different data processing methods”, EUREF 2014 Symposium, June 3-7 2014, Vilnius, Lithuania.
- Chousianitis, K., A. Ganas, A., & M. **Gianniou** (2013): “Kinematic interpretation of present-day crustal deformation in central Greece from continuous GPS measurements”, *Journal of Geodynamics*, 71, 1-13.
- Gianniou, M., D. Mastoris** (2013): “National Report of Greece to EUREF 2013”, EUREF 2013 Symposium, May 29-31 2013, Budapest, Hungary.
- Gianniou, M., E. Mitropoulou, I. Stavropoulou** (2013): “Dealing with significant differential tectonic plate velocities within an RTK-network: The case of HEPOS”, EUREF 2013 Symposium, May 29-31 2013, Budapest, Hungary.
- D. Anastasiou, D. Gaifillia, A. Katsadourou, E. Kolyvaki, X. Papanikolaou, M. **Gianniou**, G. S. Vergos and V. Pagounis (2012): “First Validation of the Hellenic Vertical Datum as a Prerequisite for the Efficient Disaster and Resource Management: The “ELEVATION” Project.”, FIG Commission 3 Workshop 2012 Spatial Information, Informal Development, Property and Housing Athens, Greece, 10-14 December 2012.
- Gianniou, M., D. Mastoris, I. Stavropoulou** (2012): “National Report of Greece to EUREF 2012”, EUREF 2012 Symposium, June 6-8 2012, Saint Mandé, France.
- Gianniou, M., E. Mitropoulou** (2012): “Impact of high ionospheric activity on GPS surveying: Experiences from the Hellenic RTK-network during 2011-12”, EUREF 2012 Symposium, June 6-8 2012, Saint Mandé, France.
- Gianniou, M.**, (2011): “National Report of Greece to EUREF 2011”, EUREF 2011 Symposium, May 25-28 2011, Chisinau, Moldova.
- Gianniou, M.**, (2011): “Detecting permanent displacements caused by earthquakes using data from the HEPOS network”, EUREF 2011 Symposium, May 25-28 2011, Chisinau, Moldova.
- Andritsanos, V., M. **Gianniou** and V. Pagounis (2011): “Vertical Datum Evaluation Based on Heterogeneous Data Combination over Attica, Greece”, FIG Working Week, 18-22 May 2011, Marrakech, Morocco.
- Gianniou, M.**, (2010): “National Report of Greece to EUREF 2010”, *EUREF 2010 Symposium*, June 2-4 2010, Gävle, Sweden.
- Gianniou, M.**, (2010): “Tectonic deformations in Greece and the operation of HEPOS network”, *EUREF 2010 Symposium*, June 2-4 2010, Gävle, Sweden.
- Gianniou, M., K. Katsampalos, C. Kotsakis.** (2010): “Real-time Positioning in ETRS89 using the Hellenic Positioning System”, *Bollettino di Geodesia e Scienze Affini*, Vol. LXIX , N. 2, 2010, pp. 151-164.

- Gianniou, M.** (2010): “Investigating the Effects of Earthquakes Using HEPOS”, «*International Association of Geodesy Symposia, Vol. 135, Gravity, Geoid and Earth Observation*, Springer Verlag, pp. 661-668.
- Kotsakis, C., K. Katsambalos, D. Ampatzidis, M. **Gianniou** (2010): “Evaluation of EGM08 using GPS and leveling heights in Greece”, *Vol. 135, Gravity, Geoid and Earth Observation*, Springer Verlag, pp. 481-488.
- Kotsakis, C., K. Katsambalos, M. **Gianniou** (2009): “Evaluation of EGM08 based on GPS and Orthometric Heights over the Hellenic Mainland”, *Newton ’s Bulletin* (joint journal of the BGI and the IGS), Issue 4, April 2009: “External Quality Evaluation Reports of EGM08”, ISSN 1810-8555, pp. 144-163.
- Gianniou, M.**, (2009): “National Report of Greece to EUREF 2009”, *EUREF 2009 Symposium*, May 27-30 2009, Florence, Italy.
- Gianniou M.** (2008): “HEPOS: Designing and Implementing an RTK-Network”, *Geoinformatics Magazine for Surveying, Mapping & GIS Professionals*, Jan./Feb. 2008 Vol 11(1), p.p 10-13.
- Gianniou M.** (2008): “HEPOS: Modern network-based GPS surveying”, *GIS GPS 2008: A supplement to Civil Engineering Surveyor*, The Journal of the Civil Engineering Surveyors UK , 2008, p.p 4-7.
- Gianniou, M.** (2002): “GPS-Höhenbestimmung unter Berücksichtigung von Geoidänderungen im Testgebiet Griechenland”, *Geodetic Week 2002*, Frankfurt, 15-17 October 2002.
- Groten, E. and M. **Gianniou** (1997): “Weighting of Code Double-Differences by means of SNR: Theory and Validation Tests”, *The Earth and the Universe*, Asteriadis, G., Bantelas, A., Contadakis, M. E., Katsambalos, K. Papadimitriou, A., and Tziavos, I.N. (eds), Volume dedicated to Professor Lyssimachos Mavridis on the occasion of his completing forty-five years of academic activities, Aristotle University of Thessaloniki, Thessaloniki: Ziti Editions 1997, pp. 413-422.
- Banyai, L. and M. **Gianniou** (1997): “Comparison of TurboRogue and Trimble SSi GPS Receivers for Ionospheric Investigation under Anti-Spoofing”, *Zeitschrift für Vermessungswesen ZfV*, Heft 3, März 1997, Verlag Konrad-Wittwer, pp. 136-142.
- Gianniou, M.** and E. Groten (1996b): “An Advanced Real-Time Algorithm for Code and Phase DGPS”, *Proceedings of the 5<sup>th</sup> International Conference on Differential Satellite Navigation Systems DSNS’96*, May 1996, St. Petersburg, Paper No. 48.
- Gianniou, M.** and E. Groten (1996a): “Improvement of an OTF Algorithm by Considering the Receiver Performance”, *Proceedings of the International Position Location and Navigation Symposium IEEE PLANS ’96*, Atlanta, Georgia, April 1996, pp. 657-663.
- Groten, E., M. **Gianniou** and A. Mathes (1996): “Influence of an Airport Radar on GPS-Positioning Including Ambiguity Resolution On-The-Fly”, *ARTIFICIAL SATELLITES Planetary Geodesy - No 28*, Vol. 31 No 3, Polish Academy of Sciences, Space Research Centre, pp. 149-157.

Mathes, A. and M. **Gianniou** (1996): "GPS for Vehicle Navigation - A System using Differential Corrections or Raw Observations for Precise Position Determination", *Proceedings of EURNAV 96, 3<sup>rd</sup> International Conference on Vehicle Navigation, Location and Control*, London, June 1996, paper No. 15.

**Gianniou**, M. (1995): "Quality Analysis of the GPS Observations for Rapid-Static and On-The-Fly Applications: Problems and Solutions", *SPN Zeitschrift für Satellitengestützte Positionierung, Navigation und Kommunikation*, 4/95, Wichmann Verlag, Karlsruhe, pp. 138-146.

Leinen, S., Mathes, A. und M. **Gianniou** (1995): "Zentimetergenauigkeit in Echtzeit - von der Offline-Auswertung zum Automatisierten GPS-Meßsystem", *Mitteilungen der DVW-Landesvereine Hessen e.V. und Thüringen e.V.*, Heft 1/1995, pp. 25-31.

Mathes, A. and M. **Gianniou** (1994): "Real-Time Rapid-Static and Kinematic Surveying at the Centimeter Level and Below", *Proceedings ION GPS-94 7<sup>th</sup> International Technical Meeting of The Satellite Division of The Institute of Navigation*, Salt Lake City, September 1994, pp. 105-113.

### 2.3 SELECTED RESEARCH PROJECTS

2022-today	Participation in the research project "TectoVision: What is controlling plate motions over the minutes to decades timescale?". European Research Council.
2022-today	Participation in the research project "AENAOS: Transient seismic and aseismic slip interactions within the earthquake cycle on vertically segmented subduction systems" funded by DAAD.
2021-2022	Research project "ERODITE: EaRth Observation Tools for the promotion of DigITal Economy. Project co-funded by the EU Erasmus+ Programme.
2014-2016	Research project "Modern surveying technologies for public environmental and technical studies". General Secretary of Research and Technology.
2012-2015	Research project "Evaluation of heights of the national leveling and trigonometric networks of Greece. Application in the area of Athens and Thessaloniki". O.P. Archimedes III - Support of Research Groups of Technological Educational EI.
1995-1996	Main responsible for the German site in the research project running between the University of Darmstadt, Germany and the Hungarian Academy of Sciences for the calibration of GPS receivers for ionospheric investigation. Supervisors: Prof. E. Groten and Prof. P. Varga.
1994	Participation in the research project running between the University of Darmstadt, Germany and the Survey Service of the State Hessen ("Landesvermessungsamt"), Germany. Development of software for

- Rapid-Static applications.
- 1993-1996 Participation in the special research project "High Precision Navigation" ("Sonderforschungsbereich 228 Hochgenaue Navigation") running between the Universities of Darmstadt and Stuttgart, Germany under the supervision of Prof. E. Groten and Prof. E. Grafarent. Development of software for On-The-Fly applications and comparative performance tests of several GPS receivers (Trimble, Leica, Ashtech, Turbo-Rogue, Novatel, and Geotracer).
- 1992 Participation in the research project for establishing an urban network in the city of Thessaloniki using GPS, under the supervision of Prof. K. Katsambalos. Participation in the measurement campaign and the processing of GPS data.
- 1992 Participation in the research project sponsored by the European Community for Geodynamics in Central Greece under the supervision of Prof. V. Papazachos. Participation in the measurement campaign and the processing of GPS data.

### **3. PROFESSIONAL EXPERIENCE**

- 2008 - today Assistant/Associate/Full Professor, Department of Surveying & Geoinformatics Engineering, University of West Attica (former Department of Surveying Engineering, Athens University of Applied Sciences).
- 2007 – 2008 2.2007 - 3.2008 Head of Geodetic Department at KTIMATOLOGIO S.A. (Hellenic Cadastre). Main duties:  
In charge of the development and operation of the Hellenic Positioning System HEPOS.  
In charge of the geodetic infrastructure of the Hellenic Cadastre.
- 2000 – 2007 8.2000 - 1.2007 quality control officer at KTIMATOLOGIO S.A. (Hellenic Cadastre). Main duties:  
Quality control of the geodetic networks of the Hellenic Cadastre.  
In charge of the design of the Hellenic Positioning System HEPOS.  
Compilation of Technical Specifications for Cadastral Projects within CSF-III.
- 1998 – 2000 Head of the Dept. of Surveying and GPS at Geomatics Ltd. Athens, Greece. Main duties:  
Design and supervision of GPS measurements, baselines reduction, adjustment of control point networks and photo control point networks (scales 1:5.000, 1:15.000 and 1:40.000) and quality control. Such projects have been carried out for the National Cadastre in Municipalities in Attica, for the production of ortho-photo maps for Ionia Street and for the EU-project OLISTAT.  
GPS-RTK measurements for a pipeline survey of 10 Km length, determination of point for coordinate transformations etc.  
Supervisor for the integration of a fully automated flight management

system for aerial survey with autonomous GPS and satellite augmentation system (OmniSTAR).

Processing of kinematic GPS data from aerial survey missions.

1997-1998

Military Service:

Since 1/1998 5/1998: IT of the Athens Military Command. Hardware and software support, development of database applications.

9/1997 - 12/1997: Survey group of the Brigade of Chios, Greece. Cadastre establishment for a military field of total area of 6 sq. kilometres containing 1.26 sq. kilometres of estates.

4/1997- 8/1997: Research Office of the Company of Engineers in Chios, Greece. Road construction, draining network, proof of safety standards, constructions budget etc.

1993-1996

Participation in many research projects during the Ph. D.-studies. These projects were focusing in software development for GPS applications, improvement of data processing algorithms and performance tests for various GPS receivers.

1990

Contract with the Alfred Wegener research Institute (AWI), Bremerhaven, Germany from 16/7 to 24/8. Study of the sounding system HYDROSWEEP, development of software for processing of GPS data.

## **4. ACADEMIC ACTIVITIES**

### **4.1 TEACHING**

- 2023 – today Professor, Department of Surveying and Geoinformatics Engineering, University of West Attica. Teaching "Surveying Instruments and Measurements Methods", "Satellite Surveying", "Applied Satellite Positioning" "Navigation" and "GNSS technologies and Navigation" (MSc).
- 2016 – 2023 Associate Professor, Department of Surveying and Geoinformatics Engineering, University of West Attica. Teaching "Surveying Instruments and Measurements Methods", "Satellite Surveying", "Navigation and Hydrography" and "GNSS technologies and Navigation" (MSc).
- 2015 Adjunct lecturer at the School of Civil Engineering at University of Patras teaching "Geodesy".
- 2008 – 2016 Assistant Professor, Department of Surveying Engineering, Technological Educational Institute of Athens. Teaching "Surveying Instruments and Measurements Methods", "Satellite Surveying" and "Navigation and Applications".
- 2006-2007 Scientific Assistant at Department of Surveying Engineering, Technological Educations Institute of Athens. Teaching "Surveying Instruments and Measurements Methods" and "Hydrography".
- 2004-2005 Adjunct lecturer at the School of Rural and Surveying Engineering at Aristotle University of Thessaloniki teaching "Geoinformatics II".
- 1993-1996 Participation in the teaching activities (courses in satellite geodesy,



supervision of Diploma-Thesis) at the Institute of Physical Geodesy, Technical University of Darmstadt, Germany.

## 4.2 ACADEMIC NOTES

2019 Academic Notes "Navigation techniques and systems" in Greek, Department of Surveying and Geoinformatics Engineering, University of West Attica.