

## 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>Marital Status</b>	Married
<b>Languages</b>	Greek (native), German (excellent), English (very good)
<b>Research Areas</b>	Geodetic satellite positioning, Networks of permanent GNSS reference stations, Geodetic reference systems

### 1. EDUCATION

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

### 2. SCIENTIFIC – RESEARCH ACTIVITIES

#### 2.1 PUBLICATIONS - PRESENTATIONS

<b>Theses</b>	
1.1.	<b>Gianniou</b> , 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
1.2.	<b>Gianniou</b> , M. (1996): "Genauigkeitssteigerung bei kurzzeit-statischen und kinematischen Satellitenmessungen bis hin zur Echtzeitanwendung", Deutsche Geodätische Kommission, Reihe C, Dissertationen, Heft Nr. 458, München.
<b>Publications in scientific journals and international congresses (main author)</b>	
2.1.	Mathes, A. and M. <b>Gianniou</b> (1994): "Real-Time Rapid-Static and Kinematic Surveying at the Centimeter Level and Below", <i>Proceedings ION GPS-94 7<sup>th</sup> International Technical Meeting of The Satellite Division of The Institute of Navigation</i> , Salt Lake City, September 1994, pp. 105-113.
2.2.	<b>Gianniou</b> , M. (1995): "Quality Analysis of the GPS Observations for Rapid-Static and On-The-Fly Applications: Problems and Solutions", <i>SPN Zeitschrift für Satellitengestützte Positionierung, Navigation und Kommunikation</i> , 4/95, Wichmann Verlag, Karlsruhe, pp. 138-146.
2.3.	<b>Gianniou</b> , M. and E. Groten (1996a): "Improvement of an OTF Algorithm by Considering the Receiver Performance", <i>Proceedings of the International Position Location and Navigation Symposium IEEE PLANS '96</i> , Atlanta, Georgia, April 1996, pp.

	657-663.
2.4.	<b>Gianniou</b> , M. and E. Groten (1996b): "An Advanced Real-Time Algorithm for Code and Phase DGPS", <i>Proceedings of the 5<sup>th</sup> International Conference on Differential Satellite Navigation Systems DSNS'96</i> , May 1996, St. Petersburg, Paper No. 48.
2.5.	Banyai, L. and M. <b>Gianniou</b> (1997): "Comparison of TurboRogue and Trimble SSi GPS Receivers for Ionospheric Investigation under Anti-Spoofing", <i>Zeitschrift für Vermessungswesen ZfV</i> , Heft 3, März 1997, Verlag Konrad-Wittwer, pp. 136-142.
2.6.	<b>Gianniou</b> , M. (2002): "GPS-Höhenbestimmung unter Berücksichtigung von Geoidänderungen im Testgebiet Griechenland", <i>Geodetic Week 2002</i> , Frankfurt, 15-17 October 2002.
2.7.	<b>Gianniou</b> , M. (2005): "Phase Center Variations of GPS Antennas and Effects on the Accuracy of Measurements ", <i>Technika. Chronika. Scientific Journal of the Technical Chamber of Greece, I, No 2-3</i>
2.8.	<b>Gianniou</b> , M. (2008): "Investigating the Effects of Earthquakes Using HEPOS", <i>Proceedings of the International Symposium on Gravity, Geoid and Earth Observation GGEO 2008</i> , June 2008, Chania, Greece.
2.9.	<b>Gianniou</b> , M., K. Katsampalos, C. Kotsakis. (2009): "Real-time Positioning in ETRS89 using the Hellenic Positioning System", <i>EUREF 2009 Symposium</i> , May 27-30 2009, Florence Italy.
2.9.	<b>Gianniou</b> , M., (2009): "National Report of Greece to EUREF 2009", <i>EUREF 2009 Symposium</i> , May 27-30 2009, Florence Italy.
<b>Publications in scientific journals and international congresses (corresponding author)</b>	
3.1.	Leinen, S., Mathes, A. und M. <b>Gianniou</b> (1995): "Zentimetergenauigkeit in Echtzeit – von der Offline-Auswertung zum Automatisierten GPS-Meßsystem", <i>Mitteilungen der DVW-Landesvereine Hessen e.V. und Thüringen e.V.</i> , Heft 1/1995, pp. 25-31.
3.2.	Mathes, A. and M. <b>Gianniou</b> (1996): "GPS for Vehicle Navigation – A System using Differential Corrections or Raw Observations for Precise Position Determination", <i>Proceedings of EURNAV 96, 3<sup>d</sup> International Conference on Vehicle Navigation, Location and Control</i> , London, June 1996, paper No. 15.
3.3.	Groten, E., M. <b>Gianniou</b> and A. Mathes (1996): "Influence of an Airport Radar on GPS-Positioning Including Ambiguity Resolution On-The-Fly", <i>ARTIFICIAL SATELLITES Planetary Geodesy</i> – No 28, Vol. 31 No 3, Polish Academy of Sciences, Space Research Centre, pp. 149-157.
3.4.	Groten, E. and M. <b>Gianniou</b> (1997): "Weighting of Code Double-Differences by means of SNR: Theory and Validation Tests", <i>The Earth and the Universe</i> , 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.
3.5.	Kotsakis, C., K. Katsambalos, D. Ampatzidis, M. <b>Gianniou</b> (2008): "Evaluation of EGM08 using GPS and leveling heights in Greece", <i>Proceedings of the International Symposium on Gravity, Geoid and Earth Observation GGEO 2008, June 2008, Chania, Greece</i>

3.6.	Kotsakis, C., K. Katsambalos, M. <b>Gianniou</b> (2008): "Evaluation of EGM08 based on GPS and Orthometric Heights over the Hellenic Mainland", <i>Special Issue of the Newton's Bulletin (joint journal of the BGI and the IGFS) with reports from the IAG/IGFS Joint Working Group on the 'Evaluation of Global Earth Gravity Models'</i> .
3.7.	Katsampalos, K., C. Kotsakis. M. <b>Gianniou</b> , (2009): "Hellenic Terrestrial Reference System 2007 (HTRS07): a regional densification of ETRS89 over Greece in support of HEPOS", <i>EUREF 2009 Symposium</i> , May 27-30 2009, Florence Italy.
<b>Other publications-presentations</b>	
4.1.	<b>Gianniou</b> , M. (1998): "Advanced Geodetic Dual Frequency Receivers by TRIMBLE – Capabilities of Multiple Uses", in Greek, <i>Trimble GPS Users Meeting</i> , Athens, Greece 26.10.98.
4.2.	<b>Gianniou</b> , M. (2000a): "Ellipsoid and Orthometric Heights – Radial Survey with GPS", Trimble GPS Users Meeting, in Greek, Athens, Greece 22.02.00
4.3.	<b>Gianniou</b> , M. (2000b): "Electromagnetic Interferences and GPS – Examples from the Greek Territory", in Greek, <i>Trimble GPS Users Meeting</i> , Athens, Greece 22.02.00.
4.4.	<b>Gianniou</b> , M. (2000c): "Termination of Selective Availability in G.P.S.: what are the changes in system applications", in Greek, <i>Bulletin of the Hellenic Association of Rural and Surveying Engineers</i> , Vol. 147, pp. 46-55.
4.5.	<b>Gianniou</b> , M. (2002): "Evaluation of Global Geoid Models for the Determination of Orthometric Heights using GPS in Greece", in Greek, <i>Trimble GPS Users Meeting</i> , Athens, Greece 28.11.02.
4.6.	<b>Gianniou</b> , M. (2004): "GNSS: Global Navigation Satellite Systems", in Greek, <i>Bulletin of the Hellenic Geographic Information Society</i> , Vol. 1, 12/2004, pp. 22-56.
4.7.	<b>Gianniou</b> , M. and Mastoris D. (2006): "The Hellenic Positioning System HEPOS", in Greek, <i>Bulletin of the Hellenic Association of Rural and Surveying Engineers</i> , Vol. 176 (Jan. - Feb.), pp. 16.
4.8.	<b>Gianniou</b> , M.. (2007): "Collection of spatial data in Greece using autonomous GPS positioning and EGNOS", in Greek, <i>Bulletin of the Hellenic Geographic Information Society</i> , Vol. 2, 2/2007, pp. 15-19.
4.9.	<b>Gianniou</b> M. (2007): "HEPOS-The Hellenic RTK Network", <i>Trimble Dimensions 2007</i> , November 2007, Las Vegas USA.
4.10.	<b>Gianniou</b> , M. (2008): "Using HEPOS in Radionavigation Applications", in Greek, <i>Satforum 2008</i> , Athens 29-30 January 2008.
4.11.	<b>Gianniou</b> , M. (2008): "HEPOS: Designing and Implementing an RTK-Network", <i>Geoinformatics Magazine for Surveying, Mapping &amp; GYS Professionals</i> , Jan./Feb. 2008 Vol 11, p.p 10-13.
4.12.	<b>Gianniou</b> , M. (2008): "HEPOS: Modern network-based GPS surveying", <i>GIS GPS 2008: A supplement to Civil Engineering Surveyor, The Journal of the Civil Engineering Surveyors UK</i> , 2008, p.p 4-7.
4.13.	Mastoris D. and M. <b>Gianniou</b> (2008): "The use of HEPOS services", in Greek, <i>Bulletin of the Hellenic Association of Rural and Surveying Engineers</i> , Vol. 191, pp. 28-29.
4.14.	<b>Gianniou</b> , M. (2008): "Network-based techniques offered by HEPOS: Description Advantages and Selection Criteria", in Greek, <i>Bulletin of the Hellenic Association of Rural and Surveying Engineers</i> , Vol. 191, pp. 30-31.
4.15.	<b>Gianniou</b> , M. (2008): "Positioning in different coordinate systems using HEPOS ", in Greek, <i>Bulletin of the Hellenic Association of Rural and Surveying Engineers</i> , Vol. 191, pp. 43-45.

## 2.2 RESEARCH PROJECTS

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.
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.
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).
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.
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. Objective of the project was the calibration of GPS receivers for ionospheric investigation. Supervisors of the project were Prof. E. Groten and Prof. P. Varga.

## 4. PROFESSIONAL EXPERIENCE

1990	Contract with the Alfred Wegener research Institute (AWI), Bremerhaven, Germany from 16/7 to 24/8. Study of the sounding system HYDROSWEET, development of software for processing of GPS data.
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.
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.
1998 – 2000	<p>Head of the School of Surveying and GPS at Geomatics Ltd. Athens, Greece. Main duties:</p> <p>The design and supervision of GPS measurements, the baselines reduction, the adjustment of control point networks and photo control point networks (scales 1:5.000, 1:15.000 and 1:40.000) as well as the the corresponding quality control. Such projects have been carried out e.g. for the National Cadastre in Municipalities in Attika, for the production of ortho-photo maps for Ionia Street and for the EU-project OLISTAT.</p> <p>“Real-Time-Kinematic” measurements for a pipeline survey of 10 Km length, accuracy evaluation of existing photogrammetric maps, determination of point for coordinate transformations etc.</p> <p>Supervisor for the integration of a fully computerized flight management system for aerial protography with autonomous and differential GPS systems (DGPS) like OmniSTAR. Quality control and evaluation of positioning accuracy.</p> <p>Processing of kinematic GPS data from aerial photography missions unsing “On-The-Fly” techniques for the estimation of the perspective points. Evaluation of compliance with the specifications.</p>
2000 – 2007	<p>8.2000 - 1.2007 quality control officer at KTIMATOLOGIO S.A. (Hellenic Cadastre). Main duties:</p> <p>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.</p>
2007 – 2008	<p>2.2007 - 3.2008 Head of Geodetic Department at KTIMATOLOGIO S.A. (Hellenic Cadastre). Main duties:</p> <p>In charge of the development and operation of the Hellenic Positioning System HEPOS. In charge of the geodetic infrastructure of the Hellenic Cadastre.</p>
2008 -today	Assistant Professor, Department of Surveying Engineering, Technological Educations Institute of Athens.

### 3. ACADEMIC ACTIVITIES

#### 3.1 TEACHING

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.
2004-2005	Teaching the Lesson “Geoinformatics II” at the School of Rural and Surveying Engineering at Aristotle University of Thessaloniki.

2006-2007	Scientific Assistant at Department of Surveying Engineering, Technological Educations Institute of Athens. Teaching "Surveying Instruments and Measurements Methods" and "Hydrography".
2008 – today	Assistant Professor, Department of Surveying Engineering, Technological Educations Institute of Athens. Teaching "Surveying Instruments and Measurements Methods", "Satellite Surveying" and "Navigation and Applications". Supervision of Diploma Thesis.

### **3.2 ACADEMIC NOTES**

2009	Notes for the Lesson "Navigation and Applications", Department of Surveying Engineering, Technological Educations Institute of Athens.
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