IAG International Symposium
Gravity, Geoid and Earth Observation 2008

23-27 June 2008
The Venetian Arsenali building
Center of Mediterranean Architecture,
Old Venetian Harbor,
Chania, Crete,
Greece.

Schedule of Oral Presentations
as of 18 June 2008

http://www.geomatlab.tuc.gr/GGEO2008

Sunday, 22 June 2008: 19:00–21:00:

Welcome Reception, The Symposium Venue, Center of Mediterranean Architecture
Participants will have a chance to meet each other. Drinks will be offered by courtesy of the local organizing Committee.

		Monday, 23 June, 2008: 8:30-10:00
7:30		Registration
9:00		Opening Remarks. ***S. P. Mertikas***, GGEO2008 Convener. ***I. Gryspolakis***, Rector of the Technical University of Crete. ***Yoichi Fukuda***, President, IAG Commission 2 'Gravity Field', International Association of Geodesy. ESA's link to GGEO2008. ***Roger Haagmans***, Head, Earth Surfaces and Interior Section, European Space Agency.
		Coffee Break 10:00-10:30
		Monday, 23 June, 2008
		Session 1: Gravimetry (terrestrial, shipborne, airborne) and gravity networks. Chairs: *Yoichi Fukuda (Japan), Leonid F. Vitushkin (France)*
10:30	S1-225	Using Global Absolute Gravity Observations to Constrain the Tie Between the Origin of ITRF and the Center of Mass of the Earth System. ***Hans-Peter Plag, Cornelius Kreemer, William C. Hammond***
10:50	S1-243	Geoid determination from airborne gravimetry in mountainous regions. ***R Forsberg and A V Olesen***
11:10	S1-229	Comparison of height anomalies determined from SLR, Absolute Gravimetry and GPS with high frequency borehole data at Herstmonceux. ***V. Smith, G. Appleby, M. Wilkinson, S. Williams, M. Ziebart***
11:30	S1-147	Comparison between sea height GPS measurements and satellite altimetry data in the Aegean Sea in Greece. Implications for local geoid improvement. ***I. Mintourakis and D. Delikaraoglou***
11:50	S1-123	Airborne Gravimetry in Russia and its Perspectives for use on an Airship Platform. ***Vyacheslav Koneshov, Gennady Verba, Leonid Vitushkin***
12:10	S1-066	Dynamical calibration of accelerometers and GPS receivers for airborne gravimetry. ***G Boedecker***
		Lunch Break 12:30-14:00
		Session 1: Gravimetry (terrestrial, shipborne, airborne) and gravity networks. Chairs: *Yoichi Fukuda (Japan), Leonid F. Vitushkin (France)*
14:00	S1-258	A cold atom gravimeter based on atom interferometry. ***S. Merlet, J. Le Gouët, Q. Bodart, A. Landragin, F. Pereira Dos Santos***
14:20	S1-023	Co-seismic Gravity Changes Computed for a Spherical Earth Model Applicable to GRACE Data. ***W. Sun, G. Fu and S. Okubo***
14:40	S1-263	Gravity vs Pseudo-Gravity: A Comparison Based on Magnetic and Gravity Gradient Measurements. ***C. Jekeli***

15:00	S1-129	Results of the Seventh International Comparison of Absolute Gravimeters ICAG-2005 at the Bureau International des Poids et Mesures, Sèvres. ***Leonid Vitushkin, Zhiheng Jiang, Lennart Robertsson, Matthias Becker, Olivier Francis, Alessandro Germak, Giancarlo D'Agostino, Vojtech Palinkas***
15:20	S1-051	Results of the European Comparison of Absolute Gravimeters in Walferdange (Luxembourg) in November 2007. ***O. Francis et al.***
		Coffee Break 15:40-16:10
		Session 2: Space-borne gravimetry: Present and Future. Chairs: *Roland Pail (Austria) and Pieter Visser (The Netherlands).*
16:10	S2-136	GRACE: Progress towards product improvement, and prospects for synergy with GOCE. ***S. Bettadpur***
16:30	S2-135	GRACE Gravity Field Determination using the Celestial Mechanics Approach – First Results. ***A. Jäggi, G. Beutler, L. Mervart***
16:50	S2-033	Regional gravity recovery from GRACE using position optimized radial base functions. ***Matthias Weigelt, Markus Antoni, Wolfgang Keller***
17:10	S2-246	DEOS series of monthly gravity field variations derived from GRACE data: comparison with independent data and validation. ***P. Ditmar, R.Klees, X.Liu, E.Revtova, Q. Zhao, H. Dobslaw, P. Visser, B. Gunter, H.C. Winsemius, H.H.G. Savenije***

Tuesday, 24 June, 2008

Session 2: Space-borne gravimetry: Present and Future.
Chairs: *Roland Pail (Austria) and Pieter Visser (The Netherlands).*

8:20	S2-084	Status of ESA's gravity mission GOCE. ***R. Floberghagen, M. Fehringer, D. Lamarre, Roger Haagmans, M. Drinkwater, M. Kern, D. Muzi***
8:40	S2-082	GOCE Level 2 Products – A Guide for Users. ***Th. Gruber, R. Rummel, European GOCE Gravity Consortium (EGG-C)***
9:00	S2-235	Complete models and estimable functions from satellite-only gravity field models. ***W.-D. Schuh, S. Becker and B. Kargoll***
9:20	S2-124	GRACE Simulation Study. ***Ulrich Meyer, Björn Frommknecht, Frank Flechtner, Roland Schmidt***
9:40	S2-111	Future mission design options for spatio-temporal geopotential recovery. ***T. Reubelt, N.J. Sneeuw, M.A. Sharifi***

Coffee Break 10:00-10:30

Session 6: Global gravity field modelling & EGM08.
Chairs: *Nikos Pavlis (USA) and Jianliang Huang (Canada).*

10:30	S6-286	Least squares, Galerkin and boundary value problems (BVP). ***F. Sansò, F. Sacerdote***
10:50	S6-223	Non-Gaussian noise in global gravity field modeling: effective re-weighting of the observations. ***J.P. van Loon***
11:10	S6-184	Improved resolution of a global GRACE gravity field model by regional refinements with adapted parameterization. ***A. Eicker, T. Mayer-Gürr, K.-H. Ilk***
11:30	S6-052	EGM2008: An Overview of its Development and Evaluation. ***N. K. Pavlis, Simon A. Holmes, Steve C. Kenyon, John K. Factor***
11:50	S6-163	Validation of the EGM08 Gravity Field with GPS-Levelling and Oceanographic Analyses. ***Th. Gruber, A. Köhl***
12:10	S6-266	Evaluation of the PGM2007A gravity model using ocean circulation and marine geoid comparisons, GPS leveling and orbit fits. ***M. Cheng, J. Ries, D. Chambers, S. Bettadpur***

Lunch Break 12:30-14:00

Session 6: Global gravity field modelling & EGM08.
Chairs: *Nikos Pavlis (USA) and Jianliang Huang (Canada).*

14:00	S6-189	EGM08 Comparisons with GPS/Leveling and Limited Aerogravity over the United States of America and its Territories. ***D.R. Roman, J. Saleh, Y.M. Wang, V.A. Childers, X. Li, & D.A. Smith***
14:20	S6-152	Evaluation of the GRACE-based Global Gravity Models in Canada. ***Jianliang Huang and Marc Véronneau***
14:40	S6-039	Evaluation of the EGM geopotential models in Europe. ***H. Denker***
15:00	S6-187	Evaluation of EGM08 using GPS and leveling heights in Greece. ***C. Kotsakis, K. Katsambalos, D. Abatzidis, M. Giannιou***
15:20	S6-101	Is Australian data really validating EGM08, or is EGM08 just in/validating Australian data? ***S.J. Claessens, W.E. Featherstone and I.M. Anjasmara***

Coffee Break 15:40-16:10

Session 4: Geoid modeling and vertical datums..
Chairs: *Ambrus Kenyeres (Hungary) and William Kearley (Australia).*

16:10 **S4-271** Estimating effects of 3D density variations on geoidal height using forward-modelling.
Robert Kingdon, Petr Vaníček, Marcelo Santos

16:30 **S4-284** Physical heights determination using modified second boundary value problem.
M. Mojzes, M. Valko

16:50 **S4-053** The combination of gravimetric quasi-geoid and GPS-levelling data in the presence of noise.
R. Klees, I. Prutkin

17:10 **S4-168** Global vertical datum unification based on the combination of the fixed gravimetric and the scalar free geodetic boundary value problem.
L. Sánchez

Wednesday, 25 June, 2008

Session 4: Geoid modeling and vertical datums..
Chairs: *Ambrus Kenyeres (Hungary) and William Kearsley (Australia).*

8:20 **S4-115** Global Vertical reference Frame
Milan Burša, Steve Kenyon, Jan Kouba, Zdislav Šíma, Viliam Vatrt, Marie Vojtíšková

8:40 **S4-154** Implementing a dynamic geoid as a vertical datum for orthometric heights in Canada.
E. Rangelova, G. Fotopoulos and M.G. Sideris

9:00 **S4-071** The GRAV-D Project.
Dru A. Smith, Dan R. Roman, Yan M Wang, Jarir Saleh, Vicki Childers, Xiopeng Li

9:20 **S4-240** EUVN_DA: Realization of the European continental GPS/leveling network.
A. Kenyeres, M. Sacher, J. Ihde, H. Denker, U. Marti

9:40 **S4-148** On the merging of heterogeneous height data from SRTM, ICESat and Survey Control Monuments for establishing uniform and accurate vertical control in Greece: An Initial Assessment and Validation.
D. Delikaraoglou and I. Mintourakis

Coffee Break 10:00-10:30

Session 5: Regional gravity field modeling.
Chairs: *Urs Marti (Switzerland) and Steve Kenyon (USA)*

10:30 **S5-277** Why local geoid computations works – a practical and theoretical study of kernels and autocorrelation functions.
Roger Hipkin

10:50 **S5-001** Toward a new quasi-geoid model and normal height datum for Iran based on the least-squares modification of the Stokes' s approach.
Ramin Kiamher

11:10 **S5-116** Determination of a gravimetric geoid model of Greece using the method of KTH.
I. Daras, H. Fan, K. Papazissi, J.D. Fairhead

11:30 **S5-109** Combined geoid solutions from global and local data in spatially restricted areas: covariance adaptations.
R. Pail, N. Kühtreiber , F. Sansó, M. Reguzzoni

11:50 **S5-041** The determination of potential difference by the joint application of measured and synthetical gravity data: a case study in Hungary.
G Papp, J Benedek

12:10	S5-056	On the determination of the terrain correction using the spherical approach. ***G. Kloch, J. Krynski***
12:30	S5-160	On finite element and finite volume methods and their application in regional gravity field modeling. ***Zuzana Fašková, Karol Mikula and Róbert Čunderlík***
12:50	S5-174	A comparative study between analytical and numerical methods for computing the gravitational potential spherical harmonics coefficients of a constant density polyhedron. ***D. Tsoulis, N.Gonindard, O. Jamet, J. Verdun***
		Gala Dinner 20:00-23:00

		Thursday, 26 June, 2008
		Session 7: Temporal gravity changes and geodynamics. Chairs: *Nico Sneeuw (Germany) and Juergen Kusche (Germany).*
8:20	S7-254	Temporal Variations in Water Storage in the Earth System and Impacts on Global Mean Sea Level Change. ***R. S. Nerem, D. P. Chambers, J. Famiglietti, J. Willis***
8:40	S7-237	Surface mass estimation from GPS site displacements, modelled ocean bottom pressure and GRACE. ***R. Rietbroek, C. Dahle, J. Kusche, F. Flechtner***
9:00	S7-289	Quantifying mass changes from the GRACE mission. ***J.-M. Lemoine , S. Bruinsma, R. Biancale, S. Gratton, S. Bourgogne, G. Ramillien***
9:20	S7-241	Postseismic gravity change following the great 2004 Sumatra-Andaman earthquake from the regional harmonic analysis of GRACE inter-satellite tracking data: Implication for the regional viscoelastic response. ***S Han, J Sauber, S Luthcke, C Ji, F Pollitz***
9:40	S7-203	Analysis of GRACE water storage estimates using water storage models in Finland. ***M. Bilker-Koivula, J. Virtanen, H. Virtanen, J. Mäkinen, M. Nordman, B. Vehviläinen, M. Huttunen, R. Mäkinen***
		Coffee Break 10:00-10:30
		Session 7: Temporal gravity changes and geodynamics. Chairs: *Nico Sneeuw (Germany) and Juergen Kusche (Germany).*
10:30	S7-008	Investigations on reliable secular ice-mass and sea-level changes from GRACE. ***O. Baur, M. Kuhn, W.E. Featherstone***
10:50	S7-207	Evaluation of GRACE and ICESat mass change estimates over Antarctica. ***B.C. Gunter, R.E.M. Riva, T. Urban, B. Schutz, R. Harpold, M. Helsen, P.Nagel***
11:10	S7-275	Assessment of GRACE Solution Accuracy on Ice Sheet Mass Balance Estimates. ***C.K. Shum, Chungyen Kuo, Hyongki Lee, Lei Wang, Jason Box, David Bromwich, Alexander Braun, Wouter van Del Wal, Patrick Wu, Erik Ivins***
11:30	S7-092	Terrestrial Water Storage Monitoring from time-laps GRACE gravimetry and Satellite Altimetry in the Okawango Delta (Botswana). ***O. B. Andersen, P. Bauer-Gottwein, R. Smith, P. Berry, P. E. Krogh***
11:50	S7-178	Observed gravity change at Syowa Station induced by Antarctic ice sheet mass change. ***K. Doi, K. Shibuya, Y. Aoyama, H. Ikeda, Y. Fukuda***
12:10	S7-251	Temporal gravity changes and crustal deformation along the Andean margin: results from combined Absolute gravity, GPS and InSAR observations. ***S. Bonvalot, J. Hinderer, G. Gabalda, B. Luck, D. Remy, F. Bondoux***

		Lunch Break 12:30-14:00
		Session 8: Earth observation and the Global Geodetic Observing System (GGOS). Chairs: *Richard Gross (USA) and Hans-Peter Plag (USA).*
14:00	S8-161	The Global Geodetic Observing System (GGOS): A Key Component in the Global Earth Observation System of Systems. ***Hans-Peter Plag***
14:20	S8-100	Designing the Next Generation Global Geodetic Networks for GGOS. ***Erricos C. Pavlis***
14:40	S8-075	The GGP (Global Geodynamics Project): an international network of superconducting gravimeters to study time-variable gravity. ***D. Crossley & J. Hinderer***
15:00	S8-204	Modeling and Observation of Loading Contribution to Time-Variable GPS Sites Positions. ***P. Gegout, J.-P. Boy, J. Hinderer, G. Ferhat***
15:20	S8-170	Improving the Alignment of GPS Solutions to ITRF with Advanced Loading Models. ***Hans-Peter Plag, William C. Hammond, Halfdan P. Kierulf, Geoff Blewitt***
		Coffee Break 15:40-16:10
		Session 8: Earth observation and the Global Geodetic Observing System (GGOS). Chairs: *Richard Gross (USA) and Hans-Peter Plag (USA).*
16:10	S8-098	Surface mass loading estimates by GRACE and GPS. ***Ernst J.O. Schrama***
16:30	S8-291	Low-degree gravitational changes from GRACE, Earth rotation, climate models, and satellite laser ranging. ***J.L. Chen and C.R. Wilson***
16:50	S8-140	A Unified Approach to Modeling the Effects of Earthquakes on the Three Pillars of Geodesy. ***Richard S. Gross, Ben F. Chao***
17:10	S8-209	Separating glacial isostatic adjustment and ice mass balance over Antarctica. ***R.E.M. Riva, B.C. Gunter, T. Urban, L.L.A. Vermeersen, R.C. Lindenbergh, B. Schutz, M. Helsen***
		Friday, 27 June, 2008
		Session 9: Geodetic monitoring of natural hazards and a Changing Environment. Chairs: *Alexander Braun (Canada) and Rene Forsberg (Denmark).*
8:20	S9-110	PALSAR InSAR Observation of Crustal Deformation due to the 2007 Chuetsu Oki Earthquake (M6.8), Japan. ***M. Furuya, Y. Takada and Y. Aoki***
8:40	S9-233	Improved orbits of altimetry satellites and reanalysis of GPS data at tide gauges for sea level investigations. ***S. Rudenko, T. Schöne, G. Gendt, F. Zhang, T. Nischan, A. Brandt, M. Rothacher***
9:00	S9-132	Comparison of Gravimetric Geoid Height Models with Tide Gage and GPS/Leveling Data. ***D.R. Roman, J. Saleh, V.A. Childers, Y.M. Wang, X. Li, & D.A. Smith***
9:20	S9-244	Geoid, sea ice thickness and ocean dynamic topography of the Arctic Ocean. ***S R Forsberg and H Skourup***
9:40	S9-299	Temporal variations of snow and ice volume in Greenland drainage systems derived from GRACE and ICESat data. ***C. Slobbe, E. Revtova, R. Klees, P. Ditmar, R. Lindenbergh***

		Coffee Break 10:00-10:30
		Session 9: Geodetic monitoring of natural hazards and a Changing Environment. Chairs: *Alexander Braun (Canada) and Rene Forsberg (Denmark).*
10:30	S9-177	New segmentation method for polarimetric SAR data. ***Mohammed Dabboor, Vassilia Karathanassi & Alexander Braun***
10:50	S9-074	Cross-comparison of JASON-1 altimetry to high frequency GPS SSH time-series and Observing the Antarctic Circumpolar Current during the DRAKE campaigns. ***S. A. Melachroinos, Y. Menard, R. Biancale, M. Sarrailh***
11:10	S9-260	Toward Real-Time GPS for Tsunami Warning Systems and Post-Earthquake Damage Assessment and Emergency Response. ***G. Blewitt, C. Kreemer, W.C. Hammond, H.-P. Plag, S. Stein, E. Okal, Y. Bar-Sever, R. Gross, T. Song and F. Webb, V. Hsu, K. Hudnut, M. Simons***
11:30	S9-131	Monitoring of stress relaxation and transfer after the 2004 Sumatra-Andaman earthquake by space geodesy. ***M. Hashimoto, T. Katagi, M. Hashizume, M. Satomura, T. Kato, P. Wu, Y. Otsuka, S. Saito (NICT)***
11:50	S9-070	Modelling the evolution of the Dunaszekcső landslide (Hungary) based on geodetic monitoring techniques. ***G Újvári, L Bányai, Gy Mentes, A Gyimóthy, G Papp***
12:10	S9-069	2006 Australian drought detected by GRACE. ***T. Hasegawa, Y. Fukuda, K. Yamamoto, T. Nakaegawa and Y. Tamura***
		Lunch Break 12:30-14:00
		Session 3: Earth Observation by Satellite Altimetry and InSAR. Chairs: *Wolfgang Bosch (Germany), Masato Furuya (Japan), Roger Haagmans (ESA).*
14:00	S3-031	ACE2: the new Global Digital Elevation Model ***Philippa A. M. Berry, R.G.Smith, J. Benveniste***
14:20	S3-013	Monitoring River systems using multi-mission Satellite Radar Altimetry. ***Luke A. Attwood, Philippa A.M. Berry, Richard G. Smith***
14:40	S3-012	Soil Surface Moisture From EnviSat RA-2: From Modelling Towards Implementation. ***S.M.S. Bramer & P.A.M. Berry***
15:00	S3-182	Regional high resolution geoid and mean sea surface topography determination by a combination of GRACE data and in-situ altimetry observations. ***T. Mayer-Gürr, W. Bosch, A. Eicker***
15:20	S3-091	Galathea-3: Dynamic Topography from GPS and ship. ***O.B. Andersen, G. Strykowski, R. Forsberg, A.V. Olesen, K. Cordua and X. Zhang***
		Coffee Break 15:40-16:10

Session 3: Earth Observation by Satellite Altimetry and InSAR.
Chairs: *Wolfgang Bosch (Germany), Masato Furuya (Japan), Roger Haagmans (ESA).*

16:10 **S3-179** EOT08a – a new global ocean tide model derived by analysis of multi-mission altimeter data.
R. Savcenko, W. Bosch and T. Mayer-Gürr

16:30 **S3-201** Accuracy assessment of altimeter-derived gravity anomalies using shipborne and airborne gravity data in the coastal zones of western Pacific.
Cheinway Hwang, Yuande Yang, Ole Andersen and Yu-Fang Lu

16:50 **S3-089** DNSC07 Truly Global Mean sea surface model from multiple satellite altimetry.
O. B. Andersen, P. Knudsen

17:10 **S3-194** Filtering of Altimetric Sea Surface Heights with local and global approaches.
A. Albertella, X. Wang and R. Rummel