ALLEGATO A

UNIVERSITÀ DEGLI STUDI DI MILANO
Procedura di valutazione per la chiamata a professore di II fascia da ricoprire ai sensi dell'art. 24, comma 6, della Legge n. 240/2010 per il settore concorsuale __04/A4 - GEOFISICA_____ ,
(settore scientifico-disciplinare __ GEO/10 – GEOFISICA DELLA TERRA SOLIDA _____)
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Gabriele Cambiotti
CURRICULUM VITAE

INFORMAZIONI PERSONALI

COGNOME	**CAMBIOTTI**
NOME	**GABRIELE**
DATA DI NASCITA	21/04/1980

EDUCATION AND TRAINING

October 2003 Diploma in Physics at the Scuola Normale Superiore of Pisa, Italy.

October 2003 Degree in Physics (110/110 with honours) at the University of Pisa, Italy.

July 2008 Master in Physics (110/110 with honours) at the University of Milan, Italy.

February 2012 PhD in Earth Sciences at the University of Milan, Italy.

Since November 2011, I am assistant professor at the Department of Earth Sciences of the University of Milan, Milan, Italy.

RESEARCH FIELDS

My research focus on global dynamics of the Earth and the modelling of crustal displacements and mass rearrangements observed by Global Navigation Satellite System (GNSS), Gravity Recovery And Climate Experiment (GRACE) and Gravity and steady state Ocean Circulation Explorer (GOCE). Particular care is devoted to the understanding of the seismic cycle, as well as of other geophysical processes as glacial isostatic adjustment, mantle convection and true polar wander, and to the improvement of inverse methods for making most of the data. I am also contributing to the definition of the requirements for solid Earth applications of the Next Generation Gravity Mission (NGGM) that the European Space Agency (ESA) is currently designing.

RESEARCH PROJECTS

2010-2012 Gravity and steady state Ocean Circulation Explorer (GOCE) Italy project, ESA Endorsement, supported by Italian Space Agency (ASI). Principal Investigator: Prof. Roberto Sabadini.

2014-2018 CAS/CAFEA international partnership program for creative research team (No. KZZDEWTZ19). Principal Investigator: Prof. Wenke Sun.

2016-2020 Joint Study Group (JSG) 0.21 "Geophysical modelling of time variations in deformation and gravity" del Intercommission Committee on Theory (ICCT), International Association of Geodesy (IAG).

2016-present Principal Investigator of the project “Geofisica” supported by the “Linea 2 del Piano di Sostegno alla Ricerca” of the University of Milan.

2018-2019 Gravitational Seismology, ESA Endorsement. Responsible for two work packages. Principal Investigator: Prof. Roberto Sabadini.

2020-present Member of the advisory board of the “Centro inteRUniversitario per l’analisi Sismotettonica Tridimensionale con applicazioni territoriali” (CRUST) headed by Prof. Giusy Lavecchia.

AWARDS, GRANTS AND ACKNOWLEDGMENTS

2009 Young Scientists Outstanding Poster Presentation (YSOPP) Award 2009 by the European Geosciences Union.

2010 Grant from European Cooperation in Science and Technology (COST) Action ES0701, “Improved Constraints on Models of Glacial Isostatic Adjustment”, for cooperating with PhD. Volker Klemann at German Research Centre for Geosciences (GFZ), Potsdam, Germany.

2011 Grant from University of California, Santa Cruz, USA, for attending the “International Symposium on Geophysical Imaging with Localized Waves”, Sanya, Hainan Island, China.

2017 “Abilitazione Scientifica Nazionale” for associate professor in the scientific disciplinary sector “GEO/10 - Solid Earth Geophysics”.

ISI (INSTITUTE OF SCIENTIFIC INFORMATION) PUBLICATIONS WITH PEER-REVIEW

Cambiotti, G., Barletta, V. R., Bordoni, A. and Sabadini, R., 2009. A comparative analysis of the solutions for a Maxwell Earth: the role of the advection and the buoyancy force, *Geophysical Journal International*, 176, 995-1006, doi:10.1111/j.1365-246X.2008.04034.x

Cambiotti, G. and Sabadini, R., 2010. The compressional and compositional stratifications in Maxwell Earth models: the gravitational overturning and the long-period tangential flux, *Geophysical Journal International*, 180, 475-500, doi: 10.1111/j.1365-246X.2009.04434.x

Cambiotti, G., Ricard, Y. and Sabadini, R., 2010. Ice age True Polar Wander in a compressible and non-hydrostatic Earth, *Geophysical Journal International* 183, 1248-1264. doi: 10.1111/j.1365-246X.2010.04791.x

Cambiotti, G., Bordoni A., Sabadini. R. and Colli, L., 2011. GRACE gravity data help constraining seismic source models of the 2004 Sumatran earthquake, *Journal of Geophysical Research,* 116, B10403, doi: 10.1029/2010JB007848

Cambiotti, G., Ricard, Y. and Sabadini, R., 2011. New insights into mantle convection True Polar Wander and rotational bulge readjustment, *Earth and Planetary Sciences Letters,* 310, 538-543, doi: 10.1016/j.epsl.2011.08.009

Cambiotti, G. and Sabadini, R., 2012. A source model for the great 2011 Tohoku earthquake (Mw=9.1) from inversion of GRACE gravity data, *Earth and Planetary Sciences Letter*, 335-336, 72-79, doi: 10.1016/j.epsl.2012.05.002

Cambiotti, G. and Sabadini, R., 2013. Gravitational seismology retrieving Centroid-Moment-Tensor solution of the 2011 Tohoku earthquake, *Journal of Geophysical Research*, 118, 183-194, doi: 10.1029/2012JB009555

Cambiotti, G., Klemann, V. and Sabadini, R., 2013. Compressible viscoelastodynamics of a spherical body at long time scales and its isostatic equilibrium, *Geophysical Journal International*, 193, 1071-1082, doi: 10.1093/gji/ggt026

Sabadini, R. and Cambiotti, G., 2013. The 2011 Tohoku-Oki earthquake GCMT solution from the GOCE model of the Earth's crust, *Bollettino di Geofisica Teorica ed Applicata*, 54, 335-346, doi: 10.4430/btga0110

Cambiotti, G., Rigamonti, S., Splendore, R., Marotta, A.M. and Sabadini, R., 2014. Power-law Maxwell rheologies and the interaction between tectonic and seismic deformations, *Geophysical Journal International*, 198, 1293-1306, doi: 10.1093/gji/ggu163

Zhou, X., Cambiotti, G., Sun, W. and Sabadini, R., 2014. The coseismic slip distribution of a shallow subduction fault constrained by prior information: the example of 2011 Tohoku (Mw 9.0) megathrust earthquake, *Geophysical Journal International*, 199, 981-995, doi: 10.1093/gji/ggu310

Cambiotti, G. and Sabadini, R., 2015. On the response of the Earth to a fault system: its evaluation beyond the epicentral reference frame, *Geophysical Journal International*, 203, 943-959, doi: 10.1093/gji/ggv344

Cambiotti, G., Wang, X., Sabadini, R. and Yuen, D.A.,2016. Residual polar motion caused by coseismic and interseismic deformations from 1900 to present, *Geophysical Journal International*, 205, 1165-1179, doi: 10.1093/gji/ggw077

Cambiotti, G., Zhou, X., Sparacino, F., Sabadini, R. and Sun, W., 2017. Joint estimate of the rupture area and slip distribution of the 2009 L'Aquila earthquake by a Bayesian inversion of GPS data, *Geophysical Journal International*, 209, 992-1003, doi: 10.1093/gji/ggx060

Cambiotti, G., Sabadini, R. and Yuen, D.A., 2018. Time dependent geoid anomalies at subduction zones due to the seismic cycle, *Geophysical Journal International*, 212, 139-150, doi: 10.1093/gji/ggx421

Sabadini, R. and Cambiotti, G., 2018. The physics of earthquakes from space gravity missions, *Rivista del Nuovo Cimento*, 41, 575-623, doi: 10.1393/ncr/i2018-10153-y

Zhou, X., Cambiotti, G., Sun, W. and Sabadini, R., 2018. Co-seismic slip distribution of the 2011 Tohoku (Mw 9.0) earthquake inverted from GPS and space-borne gravimetric data, *Earth and Planetary Physics*, 2, 120-138, doi: 10.26464/epp2018013

Gilberti, E., Antonelli, M. Cambiotti, G. and Pizzochero, P.M., 2019. Incompressible analytical models for spinning-down pulsars, *Publications of the Astronomical Society of Australia*, e036, doi: 10.1017/pasa.2019.28

Giliberti, E., Cambiotti, G., Antonelli, M. and Pizzochero, P.M., 2020. Modelling strains and stresses in continuously stratified rotating neutron stars, *Monthly Notices of the Royal Astronomical Society*, 491, 1064-1078. doi: 10.1093/mnras/stz3099

Cambiotti G., 2020. Joint estimate of the co-seismic 2011 Tohoku earthquake fault slip and post-seismic viscoelastic relaxation by GRACE data inversion, *Geophysical Journal International*, 220, 1012-1022, doi: 10.1093/gji/ggz485

Cambiotti, G., Douch, K., Cesare, S., Haagmans, R., Sneeuw, N., Anselmi, A. Marotta, A.M. and Sabadini, R., 2020 (accepted). On the earthquake detectability by the Next Generation Gravity Mission, *Surveys in Geophysics*, doi: 10.1007/s10712-020-09603-7

Cambiotti, G., Palano, M., Orecchio, B., Marotta, A.M., Barzaghi, R., Neri, G. and Sabadini, R., 2020 (submitted). New inshights into long-term aseismic deformation and regional strain rates from GPS data inversion: the case of the Pollino and Castrovillari faults, *Remote Sensing*.

Brunsvik, B., Morra, G., Cambiotti, G., Chiaraluce, L., Di Stefano, R., De Gori, P. and Yuen, D.A., 2020 (submitted). Three-dimensional L'Aquila fault morphology obtained from machine learning of aftershocks, *Tectonophysics*.

BOOKS

Sabadini, R., Vermeersen, L.L.A. and Cambiotti, G., 2016. Global Dynamics of the Earth: Applications of Viscoelastic Relaxation Theory to Solid-Earth and Planetary Geophysics, Second Edition, *Springer*, doi: 10.1007/978-94-017-7552-6

ON-LINE PUBLICATIONS

Cambiotti, G., 2009. The homogeneous self-compressed compressible sphere: the gravitational overturning and the long period tangential flux, *official website of European Geosciences Union (EGU), http://www.egu.eu/awards-medals/award/ysopp/year/2009.html*

CONFERENCES, WORKSHOPS AND SEMINARIES

2009 European Geosciences Union (EGU) General Assembly 2009, Wien, Austria:

Cambiotti, G. (poster). Self-gravitating compressible Maxwell Earth models: the role of the self-compression and the compositional initial density gradient.

American Geosciences Union (AGU) 2009 Joint Assembly, Toronto, Ontario, Canada:

Sabadini, R., Barletta, V. R., Andrea, B., and Cambiotti, G. (invited talk by R. Sabadini). New Appraisals of GIA Modelling and Space Gravity (GRACE) Data Treatment.

2010 GRACE Science Team Meeting 2010, Potsdam, Germany:

Cambiotti G., Sabadini. R., Bordoni A., and Colli, L., (talk). GRACE gravity data help constraining seismic source models of the 2004 Sumatran earthquake.

EGU General Assembly 2010, Wien, Austria:

Cambiotti G., Sabadini R. and Klemann V. (poster). Compressible viscoelastodynamics: the Longman (1963) paradox and the long period tangential flux.

Sabadini R., Cambiotti G. and Ricard Y. (talk). Ice age True Polar Wander: raising debates and new analyses.

Cambiotti G., Sabadini R. and Bordoni A. (poster). The continuous relaxation spectrum of Maxwell Earth models: a new method.

2011 Workshop of Seismic Information System for Monitoring and Alert (SISMA) by Italian Space Agency (ASI), Rome, Italy.

International Symposium on Geophysical Imaging with Localized Waves, Sanya, Hainan Island, China.

EGU General Assembly 2011, Wien, Austria:

Cambiotti, G., Sabadini. R., Bordoni A., and Colli, L., (talk). GRACE gravity data help constraining seismic source models of the 2004 Sumatran earthquake.

Sabadini. R., Cambiotti, G., and Ricard, Y., (talk). New insights into mantle convection True Polar Wander and rotational bulge readjustment.

Santolini, F., Cambiotti, G., and Sabadini, R. (poster). Sea level feedback for the 2004 Sumatran and 2010 Maule earthquakes.

2011 International Workshop on Core Dynamics 2012, Wuhan, China:

Cambiotti, G., Sabadini. R. and Ricard Y. (talk). New insights into rotational bulge readjustment and True Polar Wander driven by mantle convection and ice ages.

Seminar at LCG (Key Laboratory of Computational Geodynamics, University of Chinese Academy of Sciences), Beijing, China:

Cambiotti, G., and Sabadini. R. (seminar). Two seismic solutions of the 2011 Tohoku earthquake based on space gravity data.

Chinese Geophysical Meeting 2012, Beijing, China:

Cambiotti, G., and Sabadini. R. (talk). Gravitational seismology retrieving Centroid-Moment-Tensor solution of the 2011 Tohoku earthquake.

Cambiotti, G., Sabadini, R., and Ricard Y. (poster). New insights into rotational bulge readjustment and True Polar Wander driven by mantle convection.

2013 VIII Hotine Marussi Symposium 2013, Rome, Italy:

Sabadini. R., and Cambiotti, G. (talk). Gravitational seismology retrieving Centroid-Moment-Tensor solution of the 2011 Tohoku earthquake.

Chinese Geophysical Meeting 2013, Kunming, China:

Cambiotti, G., Rigamonti, S., Splendore, R., Marotta, A.M., and Sabadini, R. (invited talk). Four-dimensional interplay between tectonic and seismic deformations: orthotropic anisotropy and two-modal relaxation.

Rigamonti, S., Cambiotti, G., and Sabadini, R. (talk). The role of the tectonic environment in post-seismic deformations revealed by analytical solutions and relaxation spectra of anisotropic linear Maxwell Earth models.

Sabadini, R. and Cambiotti, G. (talk). Applications of Viscoelastic Relaxation Theory to Solid-Earth and Planetary Geophysics.

Seminars at Institute of Geology and Geophysics, Chinese Academy of Sciences (IGGCAS), Beijing, China:

Cambiotti, G., Ricard, Y., and Sabadini. R. (seminar). True polar wander driven by mantle convection and rotational bulge readjustment.

Cambiotti, G., and Sabadini. R. (seminar). Gravitational seismology.

2014 AGU Fall Meeting, 2014, San Francisco, California, USA:

Cambiotti, G., Wang. X, Sabadini, R., Yuen, D.A. (poster). The excitation of True Polar Wander by extreme earthquakes over time.

Congress of the Italian Geoscience Society (SGI), 2014, Milan, Italy:

Sabadini, R., Barzaghi, R., Cambiotti, G., Martotta, A.M., Crippa, B., Peresan, A., and Panza, G. (talk). Merging geophysics and space geodesy for earthquakes.

Cambiotti, G., Rigamonti, S., Splendore, R., Marotta, A.M., and Sabadini, R. (talk). Power-law Maxwell rheologies and the interaction beween tectonic and seismic deformations.

Yuri Podladchikov's Symposium at the University of Lausanne, Lausanne, Swiss.

Chinese Geophysical Meeting, 2014, Beijing, China:

Cambiotti, G., Wang, X., Sabadini, R., Yuen, D.A. (poster). Erth's rotational axis excited by large earthquakes and the implications for flow mechanisms in the mantle.

Seminar at the University of Lafayette, Lafayette, Lousiana, USA:

Cambiotti, G., and Sabadini. R. (seminar). Gravitational seismology.

Cambiotti, G., Wang, X., Sabadini, R., and Yuen, D.A. (seminar). Earthquakes can drive true polar wander over geological times.

2015 Central Asian Tectonics and Western Pacific Geodynamics International Workshop, Wuhan, China:

Yuen, D.A., Cambiotti, G., Sabadini, R., and Wang, X. (talk). A bunch of earthquakes (tens of millions) of large earthquakes can drives polar wander from mesozoic: implications for geodynamics.

2016 International Workshop on the Frontiers of Computational Geodynamics, Beijing, China:

Cambiotti, G., Zhou, X., Sparacino, F., Sabadini, R. and Sun, W., (talk). Joint estimate of the rupture area and slip distribution of the 2009 L'Aquila earthquake by a Bayesian inversion of GPS data.

International Symposium on Geodesy and Geodynamics, Tianjin, China:

Cambiotti, G., Wang. X, Sabadini, R. and Yuen, D.A. (invited talk). Residual polar motion caused by coseismic and interseismic deformations from 1900 to present.

American Geoscience Union Fall Meeting, 2016, San Francisco, California, USA:

Convener and chair at the oral and poster sessions "Interrelation between Seismicity and Gravity Field Anomalies: New Insights into Earthquake Rupture Processes".

Cambiotti, G., Wang. X, Sabadini, R. and Yuen, D.A. (talk). Residual polar motion caused by coseismic and interseismic deformations from 1900 to present.

2017 AGU Fall Meeting, 2017, San Francisco, California, USA:

Cambiotti, G., Sabadini, R. and Yuen, D.A. (talk). Geoid anomalies at subduction zones due to the seismic cycle.

Morra, G., Chiaraluce, L., Di Stefano, R. Michele, M., Cambiotti, G., Yuen, D.A. and Brunsvik, B. (poster). Stress and Strain Rates from Faults Reconstructed by Earthquakes Relocalization.

Seminar at LCG (Key Laboratory of Computational Geodynamics, University of Chinese Academy of Sciences), Beijing, China:

Cambiotti, G., Sabadini, R. and Yuen, D.A. (talk). Geoid anomalies at subduction zones due to the seismic cycle.

2018 AGU Fall Meeting, 2018, San Francisco, California, USA:

Brunsvik, B., Morra, G., Cambiotti, G., Chiaraluce, L., Di Stefano, R., Michele, M. and Yuen, D.A. (poster). Reconstruction of fault geometry through hypocenter clustering for Coulomb stress analysis during the L'Aquila earthquake swarm.

International Symposium on Geodesy and Geodynamics (ISGG), Kunming, China:

Convener and chair at the oral sessions "Theme forum".

Cambiotti, G. (talk). Estimates of coseismic and aseismic slips and regional strain rates by geodetic data inversion.

Cambiotti, G. (talk). What we can learn from geodetic and seismic strain-rate comparisons?

Geodynamics and Big Data International Conference at Palau, Sardinia, Italy:

Cambiotti, G. (talk). On non-linear Inversion of Geodetic Data for source Parameters from a Bunch of Earthquakes.

2019 Living Planet Symposium, Milan, Italy:

Cambiotti, G., Douch, K., Cesare, S., Sneeuw, N., Anselmi, A., Marotta, A.M., Sabadini, R. (talk). On the earthquake detectability by the Next Generation Gravity Mission (NGGM).

Marotta, A.M., Bollino, A., Restelli, F., Cambiotti, G., Sabadini, R. and GravSeis Group (talk). Active Tectonics and the Next Generation Gravity Mission (NGGM).

Cambiotti, G. and Sabadini, R. (poster). Co- and post-seismic gravity anomalies, the expected amplitudes and their characteristic spatial scales during the operational period of space gravity missions.

Cambiotti, G. and Sabadini, R. (poster). Joint estimate of the slip distribution of the 2011 MW=9.1 Tohoku earthquake and the rheological stratification by inversion of unfiltered GRACE data time series.

Tools, data and models for 3D seismotectonics: the Italian over time laboratory, Perugia, Italy:

Marotta, A.M., Cambiotti, G. and Sabadini, R. (talk). Active Tectonics and Earthquakes from Space Gravity Missions, opening a New Route.

Internetional Union of Geodesy and Geophysics General Assembly 2019, Montreal, Canada:

Douch, K., Cambiotti, G., Cesare, S. Sneeuw, N. Anselmi, A., Marotta, A.M. and Sabadini, R (talk). On the Possibility to Monitor the Co- and Post-seismic signal with the Next Generation Gravity Mission (NGGM).

Società Italiana di Fisica, L'Aquila, Italy:

Cambiotti, G. (talk). Viscoelastic gravitational seismology.

National Group of Solid Earth Geophysics (GNGTS) 2019, Roma, Italy:

Cambiotti, G. (talk). Joint estimate of the co-seismic 2011 Tohoku earthquake fault slip and post-seismic viscoelastic relaxation by GRACE data inversion.

DIDACTIS

I have been holding the course "Seismology and Laboratory" since 2015 at the Department of Earth Sciences of the University of Milan and a module of the course "Laboratory of Earth Physics" since 2019 at the Department of Physics of the University of Milan.

I held the course "Mathematical Methods for Geophysics" from 2012 to 2017 at the Department of Earth Sciences of the University of Milan, and the course "Tectonophysics" in 2013 at the Department of Physics of the University of Milan.

In 2016, 2017 and 2018 I held the course "Global geodynamics" for undergraduate students at the Yanqui Campus of the University of Chinese Academy of Sciences (UCAS), Beijing, China. In the 2019 I was still invited but I was unable to go because my son was born recently and in 2020 there was the Covid-19 pandemic.

In 2016 I held the course "Inverse problem and earthquakes" within the International Workshop on Big Data in Geosciences at the China University of Geosciences , Wuhan, China.

At the University of Milan, I have been co-examiner of one PhD thesis in Physics (Gilberti, E., 2019), of five master theses in Physics (Colli, L, 2009; Caronti, A., Speroni, R., 2010; Santolini, F. 2011; Rigamonti, S., 2013) and of four degree theses in Geology (Sparracino, F., Moretti, S., 2013; Di Donna, M., Berselli, G., 2015).

At the University of Milan, I have been examiner of three master theses in Earth Sciences (Ghio, M., 2015; Sparracino, F., 2016; Papeti, A., 2020), of one master thesis in Physics (Thiemme, E., 2017), of three degree theses in Geology (Gasparini, F.G., Galimberti, S., 2018; Massolo, F. 2020) and of one degree thesis in Physics (Canizzaro, G., 2014).

At present, as examiner, I am supervising one master thesis in Physics (Cusinato, S.), one master thesis in Earth Sciences (Di Donna, M.) and one degree thesis in Geology (Fedeli, V.). I am also promoting short-term stages of my students at the Instituto Nazionale di Geofisica e Vulcanologia (INGV), being the referent of two master stages at the INGV – Sezione Milano (Restelli, F. 2018 and Galimberti, S., 2020) and one master stage at the INGV – Osservatorio Etneo (Di Donna, M., 2019).

RELATED PROFESSIONAL EXPERIENCES

I am the manager of the high performance computing laboratory at the Department of Earth Sciences of the University of Milan. Currently, this laboratory offers 136 CPUSs with 256 GB of RAM to the professors and researchers of the Department.

OTHER EXPERIENCES

From 2004 to 2007 I worked in audiovisual productions as teacher, director, editor and director of photography for the professional institute “Piero Sraffa” in Crema, the digital entertainment company Neo Network in Milan and several Italian movie directors, as well as freelancing short movies for private companies and myself.

Data	07/07/2020	Luogo	MILANO