

Sara Satolli – Curriculum Vitæ et studiorum

Date of birth: 7th April 1979

Place of birth: Ortona (CH), Italy

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Research Interests

Paleomagnetism, Structural Geology, Inversion Tectonics, Tectonic rotations, Magnetic Stratigraphy, Apparent and True Polar Wander Path.

Higher Education

- 15 February 2007: PhD dissertation in “Geology and Evolution of the Lithosphere” – XIX Cicle, at the Department of Earth Science of “G.d’Annunzio” University of Chieti-Pescara Italy. Title of the PhD thesis: “Paleomagnetic analysis in the Apennines (Italy): tectonic rotations, magnetic stratigraphy and Apparent Polar Wander Path”;
- 22nd October 2003: Master Degree (Laurea) in Earth Science, full mark 110/110 *cum laude*, Earth Science Department, “G.d’Annunzio” University of Chieti-Pescara, Italy. Title of the Master theses: “Formazione della catena arcuata del Gran Sasso: nuove analisi paleomagnetiche e vincoli geologico-strutturali” (Title in English: “The curve-shaped Gran Sasso range: new paleomagnetic data and structural geology constrains”).

Fellowships

- November 2007-September 2008: post-doc funded by the City of Paris (Fellowships for foreign researchers);
- November 2007-April 2008: Fellowship for research activity in foreign structure (“Assegni regionali per attività di ricerca e alta formazione in discipline tecnico-scientifiche con priorità alla componente femminile (Interventi previsti nell’ambito del Progetto regionale formazione tecnico scientifica-POR C3/IC4E)”) fruited at Institut de Physique du Globe of Paris, France;
- 2003-2006: PhD Studentship for Doctorate on “Geology and Lithosphere Evolution” – XIX Cicle, Università degli Studi “G.d’Annunzio” di Chieti – Pescara;
- 1999-2002: University Studentships, Università degli Studi “G.d’Annunzio” di Chieti - Pescara.

Visiting Positions

- December 2004 – April 2005, November 2005, April 2006: Paleomagnetic Laboratory of Institut de Physique du Globe de Paris;
- 2003-2004: Paleomagnetic Laboratory of Istituto Nazionale di Geofisica e Vulcanologia of Rome.

Employment History

- Since October 2015: Researcher at Department of Engineering and Geology of “G.d’Annunzio” University of Chieti-Pescara (Italy);
- February-May 2015: Consultant at Department of Engineering and Geology of “G.d’Annunzio” University of Chieti-Pescara (Italy);
- December 2010-November 2014: Researcher at Department of Engineering and Geology of “G.d’Annunzio” University of Chieti-Pescara (Italy);
- April 2010-November 2010: Research Associate at Department of Geotechnologies for the Environment and the Territory of “G.d’Annunzio” University of Chieti-Pescara (Italy);
- April 2009-March 2010: Research Associate at Earth Science Department of “G.d’Annunzio” University of Chieti-Pescara (Italy);
- October 2008-March 2009: Research and Teaching Associate (ATER) at the Institut de Physique du Globe of Paris (France);
- April-December 2007: Consultant at the Centre of Excellence DEWS of Engineering Department of L’Aquila University (Italy) for landslides modelization;
- February-June 2007: Consultant at the Earth Science Department of University “G. d’Annunzio” of Chieti-Pescara (Italy) for paleomagnetic and structural analysis of Gran Sasso Range and Matese-Frosolone Mountains;
- October 2006: Consultant of the Centre Nazionale de la Recherche Scientifique (CNRS, Paris, France) for the establishment of Polar Wander Path during Aptian-Albian time;
- June 2004: Consultant of the Soprintendenza per i Beni Archeologici dell’Abruzzo (Italy) for paleomagnetic analysis to date Plio-Pleistocene clays.

Research Grants

- FIRB – Futuro in Ricerca 2008: “Paleomagnetic investigations of the Adria/Africa plate: magnetostratigraphy, tectonic rotations and plate motion reconstruction” funded by the Italian Department for University Research and Education (418.000 € grant from December 2010 to June 2015).

Teaching Activities

- Since 2009: Mentoring for Master and Doctorate Thesis.
- Since Academic year 2015/2016: teaching at “Esercitazioni di Geologia 2” (practice on Structural Geology) at “G. d’Annunzio” University of Chieti-Pescara, Italy;

- Since Academic year 2011/2012: teaching at “Attività formative di campo di Geologia 2” (Fieldwork) at “G. d’Annunzio” University of Chieti-Pescara, Italy;
- 1-10 Juin 2009: Cartography Stage L3 at Montpellier, with Paris VII University, France;
- 23 March-1 April 2009: Cartography Stage M1 with Paris VII University, France;
- 2-11 Juin 2008: Cartography Stage L3 at Montpellier, with Paris VII University, France;
- April 2007: Stratigraphy stage at Coldigioco, with “G. d’Annunzio” University of Chieti-Pescara.
- Since 2003: Has been mentioned “expert of the topic” in Structural Geology; Teaching assistant in the following classes given at the Department of Earth Sciences, University “G.d’Annunzio” of Chieti-Pescara, Italy:
 - Geology II (Fundamentals of structural geology), Prof. F. Calamita.
 - Structural Geology (advanced course in structural geology), Prof. F. Calamita.

Invited Seminars

- 18 October 2013: "Vertical axis rotation in the Northern Apennines (Italy): Is it all figured out?" Institut de Physique du Globe de Paris;
- 24 August 2012: "Plate motion reconstruction using data from orogenic belts " Monash University, Melbourne;
- 19 February 2006: Magnetic stratigraphy and Apparent Polar Wander Path from Kimmeridgian-Aptian sections from Umbria-Marche (Northern Apennines, Italy), University “G.d’Annunzio” of Chieti-Pescara (Italy).

Other qualifications

- 2013: National Scientific Habilitation (ASN Abilitazione Scientifica Nazionale) to apply as Associate Professor in the sector: 04/A2 – Geologia Strutturale, Geologia Stratigrafica, Sedimentologia e Paleontologia (Structural Geology, Stratigraphy, Sedimentology and Paleontology).
- since 2012: Affiliation to the Alpine Magnetic Laboratory of Peveragno (CN);
- June 2007: Habilitation to the Geology profession.

Organization of Congress

October 4th 2013: “Jack’s day - Una giornata in memoria di Giovanni Pallini” at Department of Engineering and Geology, University “G.d’Annunzio” of Chieti-Pescara, Italy.

Training courses

- 29-31 October 2014: “Plates and Disasters” (Roma Tre University);
- June 2013: Summer school for Rock Magnetism at Institute for rock Magnetism - University of Minnesota
- June 14-16 2011: “Geocronologia: tecniche di datazione e metodi di correlazione” (Ispra, Roma)

Reviewer Activities

- Tectonophysics;
- Geological Society of America Bulletin;
- Journal of Rock Mechanics and Geotechnical Engineering;
- Geological Quarterly;
- European PhD “Magnetic fabric study and its relation with the strain in the central-western sector from the Central Pyrenees (Aragón and Navarra)” by Oscar Pueyo Anchueta dell’Università di Zaragoza.

Membership to Societies

- Società Geologica Italiana;
- American Geophysical Union;
- European Geoscience Union.

Foreign Languages

- English (advanced)
- French (advanced)
- Italian (mother tongue)

Publications on peer-reviewed journals

15. Satolli S., Turtù A., Early Cretaceous magnetostratigraphy of the Salto del Cieco section (Northern Apennines, Italy) (2016) Newsletters on Stratigraphy 48, 2. (IF2014 = 3.2)
14. Satolli S., Turtù A., Donatelli U. (2015), Detailed magnetostratigraphy of the Salto del Cieco section (Northern Apennines, Italy) from the Pliensbachian to Jurassic/Cretaceous boundary, Newsletters on Stratigraphy, 48/2, 153-177. (IF2014 = 3.2)
13. Satolli S., Pace P., Viandante M.G., Calamita F. (2014), Lateral variations in tectonic style across cross-strike discontinuities: An example from the Central Apennines belt (Italy), International Journal of Earth Science, Volume 103 (8), 2301-2313. (IF = 2.093)
12. Turtù A., Satolli S., Maniscalco R., Calamita F., Speranza F. (2013), Understanding progressive-arc- and strike-slip-related rotations in curve-shaped orogenic belts: the case of the Olevano-Antrodoco-Sibillini thrust (Northern Apennines, Italy), Journal of Geophysical Research – Solid Earth, 118 (2), 459-473. (IF = 3.440)
11. Calamita F., Satolli S., Turtù A. (2012), Analysis of thrust shear zones in curved-shaped belts: Deformation mode and timing of the Olevano-Antrodoco-Sibillini thrust (Central/Northern Apennines of Italy), Journal of Structural Geology, vol. 44, 179-187, doi: 10.1016/j.jsg.2012.07.007 (IF = 2.285)
10. Di Domenica A., Turtù A., Satolli S., Calamita F. (2012), Relationships between thrusts and normal faults in curved belts: New insight in the inversion tectonics of the Central-Northern Apennines

- (Italy), *Journal of Structural Geology*, 42, doi.org/10.1016/j.jsg.2012.06.008. (IF = 2.285)
9. Calamita F., Pace, P., Satolli S., (2012), Coexistence of fault-propagation and fault-bend folding in curve-shaped foreland fold-and-thrust belts: examples from the Northern Apennines (Italy), *Terra Nova*, 24, 396-405, doi: 10.1111/j.1365-3121.2012.01079.x (IF = 2.830)
 8. Satolli S., Calamita F. (2012), Influence of Inversion Tectonics in the Bending of a Foreland Fold-and-Thrust Belt: The Case of the Northern Apennines (Italy), *Journal Of The Virtual Explorer*, vol. 43, ISSN: 1441-8142, doi: 10.3809/jvirtex.2012.00302
 7. Calamita F., Satolli S., Scisciani V., Esestime P., Pace P. (2011), Contrasting styles of fault reactivation in curved orogenic belts: Examples from the Central Apennines (Italy), *GSA Bulletin*, doi: 10.1130/B30276.1 (IF = 3.787)
 6. Satolli, S., Besse, J., Calamita, F. (2008), Paleomagnetism of Aptian-Albian sections from the Northern Apennines (Italy): Implications for the 150-100 Ma apparent polar wander of Adria and Africa, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2008.09.013. (IF = 3.955)
 5. Satolli, S., F. Calamita (2008), Differences and similarities between the Central and the Southern Apennines (Italy): examining the Gran Sasso vs. the Matese-Frosolone salients using paleomagnetic, geological and structural data, *J. Geophys. Res. - Solid Earth*, 113, B10101, doi: 10.1029/2008JB005699. (IF = 3.147)
 4. Satolli, S., J. Besse, F. Speranza, F. Calamita (2007), The 125-150 Ma high-resolution Apparent Polar Wander Path for Adria from magnetostratigraphic sections in Umbria-Marche (Northern Apennines, Italy): timing and duration of the global Jurassic-Cretaceous hairpin turn, *Earth and Planetary Science Letters*, doi: 10.1016/j.epsl.2007.03.009 (IF = 3.873)
 3. Speranza, F., S. Satolli, E. Mattioli, F. Calamita (2005), Magnetic stratigraphy of Kimmeridgian - Aptian sections from Umbria-Marche (Italy): New details on the M-polarity sequence, *Journal of Geophysical Research*, Vol. 110, B12109, doi:10.1029/2005JB003884. (IF= 2.784)
 2. Satolli, S., F. Speranza, F. Calamita (2005), Paleomagnetism of the Gran Sasso range salient (central Apennines, Italy): Pattern of orogenic rotations due to translation of a massive carbonate indenter, *Tectonics*, Vol. 24, No. 4, TC4019, 10.1029/2004TC001771 (IF= 2.215)
 1. Calamita F., Pelorosso M., Satolli S. (2003). Il ruolo dell'architettura del paleomargine Mesozoico di Adria nel sistema orogenico del Gran Sasso d'Italia (Appennino centrale). *Bollettino Della Società Geologica Italiana*, vol. 122; p. 337-349, ISSN: 0037-8763.

Extended abstracts/Conference Publications

14. Pace P., Satolli S., Calamita F. (2012), Along-strike variation of fault-related folding in a curve-shaped foreland fold-and-thrust belt: A case from the Northern Apennines, *Rendiconti Online Della Società Geologica Italiana*, vol. 21, p. 44-46.
13. Satolli S., Turtù A., Calamita F. (2012), Oblique vs. frontal thrust shear zones: The curve-shaped Olevano-Antrodoco-Sibillini thrust (Central-Northern Apennines, Italy), *Rendiconti Online Della Società Geologica Italiana*, vol. 21, p. 55-57.
12. Di Domenica A., Turtù A., Satolli S., Calamita F. (2012), Inherited discontinuities in curved belt development: The oblique thrust front of the Central-Northern Apennines, *Rendiconti Online Della Società Geologica Italiana*, vol. 21, p. 30-32.

11. Pace P., Satolli S., Calamita F. (2012), The control of mechanical stratigraphy and inversion tectonics on thrust-related folding along the curved Northern Apennines thrust front, *Rendiconti Online Della Società Geologica Italiana*, vol. 22, p. 162-165.
10. Turtù A., Satolli S., Calamita F., Speranza F. (2010), Preliminary paleomagnetic analysis along the Olevano-Antròdoco fault zone, *Rendiconti Online Della Società Geologica Italiana*, vol. 11, p. 356-357.
9. Satolli S., Viandante M.G., Calamita F. (2010), Constrain by low-temperature thermochronometers in the evolution of the Central Apennines, 85° Congresso Nazionale della Società Geologica Italiana – Sassari, *Rendiconti Online Della Società Geologica Italiana*, vol. 11, p. 426-427.
8. Di Domenica A., Satolli S., Calamita F. (2010), Neogene-Quaternary polyphase inversion tectonics in the Central Apennines (Italy): Implication for seismic hazard assesment, *Rendiconti Online Della Società Geologica Italiana*, vol. 11, p. 330-331.
7. Satolli S., Agostini S., Turtù A., Calamita F. (2010), Inversion tectonic in the Umbria-Marche region (Apennines, Italy): Preliminary results from a new paleomagnetic approach, 85° Congresso Nazionale della Società Geologica Italiana – Sassari, *Rendiconti Online Della Società Geologica Italiana*, vol. 11, p. 350-351.
6. Satolli S., Scisciani V., Calamita F. (2010), Coexistence of shortcut and reactivation anticlines in the Central Apennines, Convegno del Gruppo Italiano di geologia Strutturale – Potenza, *Rendiconti Online Della Società Geologica Italiana*, vol. 10, p. 116-119.
5. Satolli S., Calamita F., Besse J. (2009). The 100-150 Ma Apparent Polar Wander Path for Adria/Africa, Workshop of the Italian Group of Structural Geology – Udine, *Rendiconti Della Società Geologica Italiana*, vol. 5; p. 196-198, ISSN: 0392-3037.
4. Calamita F., Esestine P., Paltrinieri W., Satolli S., Scisciani V., Tavarnelli E., Viandante M.G. (2007). The role of Adria paleomargin architecture on the geometry and kinematics of the Central-Southern Apennine chain during the Neogene-Quaternary evolution. *Rendiconti Della Società Geologica Italiana*, vol. 5; p. 93-94, ISSN: 0392-3037.
3. Satolli S., Calamita F. (2007). Il differente pattern di rotazioni paleomagnetiche fra Appennino Centro-Settentrionale e Meridionale: alcune considerazioni, Workshop of the Italian Group of Structural Geology – Urbino, *Rendiconti Della Società Geologica Italiana*, vol. 4; p. 293-295, ISSN: 0392-3037.
2. Satolli S., Besse J., Calamita F., Speranza F. (2006). Determinazione di una curva di deriva polare apparente di Adria fra 120 e 150 Ma da sezioni Umbro-Marchigiane (Appennino settentrionale, Italia), Workshop of the Italian Group of Structural Geology – Chieti, *Rendiconti Della Società Geologica Italiana*, vol. 2; p. 167-168, ISSN: 0392-3037.
1. Calamita F., Satolli S., Speranza F. (2005). Comparison between paleomagnetic and geological-structural data in the Gran Sasso salient (Central Apennines). Workshop of Italian Group of Structural Geology – Spoleto, *Rendiconti Della Società Geologica Italiana*, vol. 1; p. 72-74, ISSN: 0392-3037.

Participation to International Conferences

- 31 August 6 September 2014: Castle Meeting
Satolli S., Turtù, A., Jurassic magnetostratigraphy from the Northern Apennines (Italy)

- 9-13 December 2013: AGU Fall meeting – San Francisco
Satolli S., Turtù, A., Zooming in the kinematic of a curved belt from large- to small-scale: Examples from the Northern Apennines (Italy)
- August 5-10 2012: 34th International Geological Congress – Brisbane (Australia)
Satolli, S., Turtù, A. APWP reconstruction using data from orogenic belts: Preliminary results from Jurassic/Cretaceous sections in the Northern Apennines (Italy). (poster)
- June 5-8 2012: GeoHistories from Gubbio Apennines – Gubbio (Italy)
Satolli, S., Speranza F., Besse J., Calamita F., Plate motion reconstruction using data from orogenic belts: The Northern Apennines (Italy) case (talk)
- 4-8 April 2011: EGU General assembly 2011 - Vienna
Calamita F., Satolli S., Scisciani V., Esestime P., Pace P., Different styles of fault reactivation in the Central Apennines (Italy)
Calamita F., Satolli S., The S-C tectonites in the Northern Apennines (Italy) thrust shear zone: Implication for mode and timing of deformation;
- 15-19 December 2008: AGU Fall meeting – San Francisco
Satolli, S., Besse, J., Calamita, F., The 150-100 Ma Apparent Polar Wander of Adria and Africa Using Data From the Northern Apennines (Italy)
Calamita, F., Satolli, S., Constrain on the Kinematic Evolution of the Central Apennines (Italy) Using Paleomagnetic and Geological Data;
- 15-20 April 2007: EGU General Assembly 2007 – Vienna
Satolli, S., J. Besse, F. Calamita, Paleomagnetic analysis of Aptian-Albian (125-100 Ma) sections from Northern Apennines (Italy): apparent polar wander path of Adria and its consequences
- 24-27 April 2006: PhD meeting – IPGP – Paris
Satolli, S., Apparent Polar Wander and True Polar Wander from Northern Apennines paleomagnetic data (Italy);
- 5-9 December 2005: AGU Fall meeting – San Francisco
S. Satolli, J. Besse, F. Calamita, F. Speranza, High Resolution Apparent Polar Wander Path from Kimmeridgian-Aptian Umbro-Marchean Sections (Northern Apennines, Italy)
- 20-28 August 2004: 32nd International Geological Congress – Firenze
S. Satolli, F. Speranza, F. Calamita, Pattern of orogenic rotation in the Gran Sasso salient (Central Apennines, Italy): New paleomagnetic data.

Participation to National Conferences and Meetings

- 10-12 September 2014: Congresso SGI-SIMP
Satolli S., Turtù, A., Early Cretaceous magnetostratigraphy of the Salto del Cieco section (Northern Apennines, Italy)
- 19-23 September 2011: 8° Forum Italiano di Scienze della Terra – Rimini
Turtù A., Satolli S., Maniscalco R., Calamita F., Speranza F., Paleomagnetic analysis along the Olevano-Antrodoco-Sibillini fault zone (Northern Apennines, Italy);
- 6-8 September 2010: 85° Congresso Nazionale della Società Geologica Italiana – Sassari
Satolli, S., Agostini S., Turtù A., Calamita, F., Inversion tectonic in the Umbria-Marche region (Apennines, Italy): Preliminary results from a new paleomagnetic approach;

- Satolli, S., Viandante M.G., Calamita, F., Constrain by low-temperature thermochronometers in the evolution of the Central Apennines;
- February 25-28 2009: Convegno del Gruppo Italiano di geologia Strutturale – Potenza
Satolli, S., Scisciani V., Calamita F., Coexistence of shortcut and reactivation anticlines in the Central Apennines;
 - 9-11 September 2009: Settimo Forum Italiano di Scienze della Terra – Rimini
Satolli S., Viandante M.G., Calamita F., Characterization of the Sangro-Volturno line (Central/Southern Apennines) using geological, paleomagnetic and thermochronometric data;
Calamita F., Esestime P., Pace P., Satolli S., Scisciani, V., Short-cut anticlines vs. full inversion anticlines in the salient structures of the Central-Southern Apennines;
 - 16-19 November 2009: Convegno del Gruppo Nazionale di Geofisica della Terra Solida-Trieste
Calamita F., Pizzi A., Scisciani V., Satolli S., Pomposo G., Assetto tettonico e sismicità nell'Appennino centrale;
 - 25-28 February 2009: Workshop of the Italian Group of Structural Geology – Udine
Satolli, S., F. Calamita, J. Besse, The 100-150 Ma Apparent Polar Wander Path for Adria/Africa.
 - 15-17 September 2008: 84° Congresso Nazionale della società Geologica Italiana – Sassari
Calamita, F., Satolli, S., The central Apennines as the junction zone between the northern Apennines arc and the southern Apennines-calabrian arc;
 - 12-14 September 2007: Sesto Forum Italiano di Scienze della Terra – Rimini
Satolli, S., F. Calamita, Comparison between two curve-shaped structures from the Central-Northern and Southern Apennines Arcs: differences and analogies;
 - 12-13 March 2007: Workshop of the Italian Group of Structural Geology – Urbino
Satolli, S., F. Calamita, Il differente pattern di rotazioni paleomagnetiche fra Appennino Centro-Settentrionale e Meridionale: alcune considerazioni;
 - 27-28 February 2006: Workshop of the Italian Group of Structural Geology – Chieti
Satolli, S., J. Besse, F. Calamita, F. Speranza, Determinazione di una curva di deriva polare apparente di Adria fra 120 e 150 Ma da sezioni Umbro-Marchigiane (Appennino settentrionale, Italia);
 - 21-22 February 2005: Workshop of Italian Group of Structural Geology – Spoleto
F. Calamita, S. Satolli, F. Speranza, Comparison between paleomagnetic and geological-structural data in the Gran Sasso salient (Central Apennines);
 - 28-30 January 2004: Workshop of Italian Group of Structural Geology – Prato
S. Satolli, F. Speranza, F. Calamita, New paleomagnetic data from the Gran Sasso salient (Central Apennines) (talk)