

CURRICULUM VITAE

Date of birth: 12 June 1968, married with 3 children.

Current position:

“Professore Associato” [Associate Professor] of Structural Geology at the Geology Division of the School of Sciences and Technology at the University of Camerino, Italy.

Research interests

1. Earthquake Geology

- Individuation and characterization of active faults in central and southern Italy, focusing on their seismogenic potential;
- structural style and chronology of faulting;
- Active fault interaction and spatio-temporal evolution of active faults system.

2. Fault and Fractures in Carbonates

- nucleation and growth mechanisms of multiscale fault zones exposed in different typologies of carbonate rocks and tectonic contexts;
- relations among the characteristics of specific fault zones (spatial, geometrical, kinematic and petrophysical properties) and of the main factors that control their formation and spatial-temporal evolution;
- structural and petrophysical characteristics of fault zones in massive and stratified carbonate rocks.

3. Regional Geology

- Definition of the present-day structural setting of the Apenninic-Maghrebian orogenic system in central and southern Italy;
- Interpretation of the deep Apenninic thrust belt structure by means of regional balanced and restored geological cross-sections;
- Evaluation of the tectonic control exerted by pre-orogenic faults.

Academic history

- University of Camerino, Geology Division, School of Sciences and Technology:
 - o 2010 – present. Associate professor in Structural Geology;
 - o 1999-2010. Researcher in Structural Geology;
 - o 1998-1999. Post-Doc in Structural Geology;
 - o 1993-1997. PhD in Tectonics and Structural Geology, supervised by Professor Giuseppe Cello;
 - o 1988-1993. B.Sc. (Honors) in Geological Sciences.

Awards/Honours

- February 2014. Invited Researcher, Stanford University, Stanford, USA.
- February 2011. E. Tondi - The role of deformation bands, stylolites and sheared stylolites in fault development in carbonate grainstones of Majella Mountain, Italy. *Journal of Structural Geology*, Volume 28, Issue 3 (2006), Pages 376-391 - is one of the "Top-50 most cited articles" published in *Journal of Structural Geology* January 2006 - February 2011.
- May 2008. Invited Professor in Seismotectonics, University of Palermo, Italy.
- February 2005. Invited Researcher, Stanford University, Stanford, USA.

Membership

- Member of the European Geosciences Union
- Member of the Geological Society of America (GSA).
- Member of the Società Geologica Italiana.

Sezione Gruppo Italiano di Geologia Strutturale.

Sezione Georisorse ed Energia

Scientific Service/Editorial activity

- October 2016. Evaluator for the Italian Evaluation of Research Quality 2004-2010 (VQR 2010-2012).
- June 2012. Evaluator for the Italian Evaluation of Research Quality 2004-2010 (VQR 2004-2010).
- January 2015-January 2016 Guest Editor of Italian Journal of Geosciences. Tondi, E., Iannace, A., Storti, F., Antonellini, M., Agosta F. & Mazzoli S. (Eds.). Fractured carbonate reservoirs. Italian Journal of Geosciences, Volume 134 (2015) f.3 and Vol. 135 (2016) f.1.
- June 2012. Associate Editor for Dataset Papers in Geosciences (Geophysics section) <http://www.datasets.com>; Journal of Geological Research <http://www.hindawi.com/journals/jgr/>.
- Sept 2009 – Sept 2010. Guest Editor of the Journal of Structural Geology. Agosta F. and Tondi E. (Eds.) (2010) "Faulting and Fracturing in Carbonate Rocks: New Insights on Deformation Mechanisms and Petrophysical Properties". Journal of Structural Geology Vol. 32, Issue 9.
- November 2009. Served as external PhD examiner for Utrecht University, Netherland.
- Sept 2008 – Sept 2009. Guest Editor of Tectonophysics. Tondi E., Chiaraluce L. and Gerald Roberts (Eds.) (2009) "Ten years after the Umbria-Marche earthquake", Tectonophysics Vol. 476, Issue 1-2.
- 2006-2008. Evaluator of research project: Fondazione CARIPARO, Call for excellent research project 2006/2007; The Israel Science Foundation (IFS).
- May 2006 to present. Evaluator of International Projects as member of the Technical Committee of Eurogia <http://www.eurogia.com/>.
- 1999-2000. Guest Editor of Journal of Geodynamics. Cello G. and Tondi E. (Eds.) (2000) "The resolution of geological analysis and models for earthquake faulting studies". Journal of Geodynamics, Vol. 29, Issue. 3-5.

Workshops/Congress organization

- Convener of several EGU sessions.
- "Seismogenic structures in the Umbria-Marche Apennines and surface effect of the 26 September 1997 earthquake". Camerino, Italy, 28-29 October 1997.
- "The resolution of geological analysis and models for earthquake faulting studies". Camerino, Italy, 3-6 June 1998;
- "Active faults: analysis, processes and monitoring". Camerino, Italy, 3-6 May 2002.
- "Ten years after the Umbria-Marche earthquake: state of the art of the seismogenesis in Italy". Camerino, Italy, 26-27 June 2007.
- "From 1997 to 2016: three destructive earthquakes along the Central Apennine Fault System, Italy". International Field Trip - July 19th -22nd 2017

Social/Institutional Service

- 2016-to present. Head of the Geology Division of the School of Science and Technology of the University of Camerino.
- Italian coordinator for the bilateral agreement between the University of Camerino and the following European University, for student mobility within the E.U. Socrates-Erasmus:

- Aalborg University, Institute of Communication Technology. Aalborg, Denmark;
- Aristotle University of Thessaloniki, Dept. of Geophysics. Thessaloniki, Greece;
- Faculty of Science at Charles' University. Praha, Czech Republic;
- Granada University, Dept. of Geodynamics. Granada, Spain;
- National Institute for Earth Physics. Bucharest, Romania;
- University of Aarhus, Dept. of Earth Sciences. Aarhus, Denmark.
- 2002-to present. Member of the Ph.D committee at the School of Advanced Studies of the University of Camerino.
- 2014-to present. Mayor of the municipality of Camporotondo di Fiastrone (MC), Italy.
- 2009-2014. Vice-Mayor of the municipality of Camporotondo di Fiastrone (MC), Italy.

Invited talks

- 2 invited talks at EGU conferences in past 5 years
- 5 invited seminars to Italian and European Universities in past 5 years

Principal grants

- 2018 to present. Responsible of the contract between GEOMORE s.r.l. Spinoff of Unicom and Total Italia E&P relative to the "studio sismotettonico dell'area del giacimento petrolifero di tempa rossa e caratterizzazione della faglia scorciabuoi". 80.000 Euro.
- 2017 to present. Responsible of the research project between Unicom and Total E&P relative to: OMAN STRUCTURAL CUTS. 95.000 Euro.
- 2017 to present. Responsible of the contract between Unicom and ENEL GREEN POWER S.P.A. relative to the: "Identificazione e Parametrizzazione delle Faglie Attive e Capaci della zona di Campotosto (Aq)". 95.000 Euro.
- 2012 to present. Promoter and co-director of the research project "Reservoir Characterization Project" (www.rechproject.com) funded by a Consortium of Oil Company (Shell Italy E&P; Total Italy E&P; ENGIE Group). 525.000 Euro.
- 2014-2016. Coordinator of the FAR_UNICAM project: Characterization and modelling of natural reservoirs of geofluids in fractured carbonate rocks. 52.800 Euro.
- 2011 to 2013. National scientific coordinator of the "Characterization and modelling of natural reservoirs of geofluids in fractured carbonate rocks", project funded to the Italian Ministry of University and Research, MIUR. 184.678 Euro
- 2006 to 2013. Promoter and director of the research project "Faults and Fractures in Carbonates" funded by a Consortium of Oil Company (Shell Italy E&P; Statoil; Total Italy E&P). 600.000 Euro
- From 2006 to 2007, National scientific coordinator of the "Genesis, evolution, and architecture of different types of multiscale crustal shear zones" project funded by the Italian Ministry of University and Research, MIUR. 73.158 Euro
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Teaching

- Undergraduate: Earthquake Geology, Structural Geology, Rock Deformation, Introduction to Field Geology, Geological Mapping.
- Post-graduate: Supervised/supervising 12 PhD students; 32 Master's students.
- Professor of the Master course on Petroleum Geosciences of the University of Basilicata, Italy.

SPINOFF-STARTUP

Promoter and scientific responsible of the academic spinoff at University of Camerino "Geological Modelling for Risks and Resources Evaluation – GEOMORE; web site: www.geomore.it.

Principal recent publications (2012-2018)

1. Agosta, F., Ruano, P., Rustichelli, A., Tondi, E., Galindo-Zaldívar, J., , Sanz de Galdeano, C. 2012. Inner structure and deformation mechanisms of normal faults in conglomerates and carbonate grainstones (Granada Basin, Betic Cordillera, Spain): Inferences on fault permeability. *Journal of Structural Geology*, 45 , 4-20.
2. Cilona, A., Baud, P., Tondi E., Agosta F., Vinciguerra S., Rustichelli A ., Spiers C.J. 2012. Deformation bands in porous carbonate grainstones: field and laboratory observations. *Journal of Structural Geology*, 45 , 137-157.
3. Rustichelli, A ., Tondi, E., Agosta, F., Cilona, A ., Giorgioni, M., 2012. Development and distribution of bed-parallel compaction bands and pressure solution seams in the Bolognano Formation carbonates (Majella Mountain, Italy). *Journal of Structural Geology*. 37, 181–199.
4. Tondi, E., Cilona, A ., Agosta, F., Aydin, A ., Rustichelli, A ., Renda, P., Giunta, G., 2012. Growth processes, dimensional parameters and scaling relationships of two conjugate sets of compactive shear bands in porous carbonate grainstones, Favignana Island, Italy. *Journal of Structural Geology* 37, 53-64.
5. Rustichelli A., Tondi E., Agosta F., Di Celma C. & Giorgioni M. 2013. Sedimentologic and diagenetic controls on pore-network characteristics of Oligocene-Miocene ramp carbonates (Majella Mountain, central Italy). *AAPG Bulletin*, 97 (3) , 487-524.
6. Rustichelli A., Agosta F., Tondi E., Spina V. 2013. Spacing distribution of bed-perpendicular joints throughout layered, shallow-marine carbonates (Granada Basin, southern Spain). *Tectonophysics*, 582 , 188-204.
7. Rustichelli A., Agosta F., Tondi E., Galindo-Zaldivar J., Di Celma C., Spina V. 2013. Faults growth as a key control on the sedimentary architecture and depositional environments of extensional basins: the case study of the Tablate area (Granada Basin, Spain). *Italian Journal of Geosciences*, 132 (3) , 422-442.
8. Korneva, I., Tondi, E., Agosta, F., Rustichelli, A., Spina, V., Bitonte, R., Di Cuia, R. 2014. Structural properties of fractured and faulted Cretaceous platform carbonates, Murge Plateau (southern Italy). *Marine and Petroleum Geology*, 57, 312-326.
9. Antonellini, M., Cilona, A., Tondi, E., Zambrano, M., Agosta, F., 2014. Fluid flow numerical experiments of faulted porous carbonates, Northwest Sicily (Italy). *Marine and Petroleum Geology*, 55, 185-201.
10. Aringoli D., Cavitolo P., Farabollini P., Galindo-Zaldivar J., Gentili B., Giano S.I., Lòpez-Garrido A.C., Materazzi M, Nibbi L., Pedrera A., Pambianchi G., Ruano P., Ruiz-Constàn A., Sanz de Galdeano C., Savelli D., Tondi E., Troiani F. (2014). Morphotectonic characterization of the quaternary intermontane basins in the Umbria-Marche Apennines (Italy). *Rend. Fis. Acc. Lincei* 25 (Suppl 2), S111–S128. DOI 10.1007/s12210-014-0330-0
11. Cilona A., Faulkner D.R., Tondi E., Rustichelli A. Vinciguerra S., Agosta F., Baud P., 2014. Compactant strain localization in the porous carbonates of Bolognano Formation (Majella Mountain, Italy). *Journal of Structural Geology*, 67, 75-93.
12. Arzilli F., Cilona, A., Mancini, L., Tondi, E. (2015). Using synchrotron Xray microtomography to characterize the pore network of reservoir rocks: A case study on carbonates. *Advances in Water Resources*. <http://dx.doi.org/10.1016/j.advwatres.2015.07.016>.
13. Rustichelli A., Iannace A., Girundo M., 2015. Dolomitization impact on fracture density in pelagic carbonates: contrasting case studies from the Gargano Promontory and the Southern Apennines (Italy), in *Italian Journal of Geosciences*, 134, 556-575.
14. Zambrano M., Tondi E., Korneva I., Panza E., Agosta F., Janiseck J.M., Giorgioni M. 2015. Fracture properties analysis and discrete fracture network modelling of faulted tight limestones, Murge Plateau, Italy, *Italian Journal of Geosciences*, 135, 55-67.
15. Jablonska D., Di Celma C., Korneva I., Tondi E., Alsop I., 2015. Structural features of mass-transport deposits within carbonates from southern Italy, *Italian Journal of Geosciences*, 135, 30-40.
16. Korneva I., Cilona A., Tondi E., Agosta F., Giorgioni M. 2015. Characterisation of the permeability anisotropy of Cretaceous platform carbonates by using 3D fracture modelling: the

case study of Agri Valley fault zones (south Italy). *Italian Journal of Geosciences*, vol. 134, pp. 396-408.

17. Panza E., Agosta F., Zambrano M., Tondi E., Prosser G., Giorgioni M., Janiseck J.M. 2015. Structural architecture and Discrete Fracture Network modelling of layered fractured carbonates (Altamura Fm., Italy). *Italian Journal of Geosciences*, vol. 134, pp. 409-422.
18. Rustichelli A., Tondi E., Korneva I., Baud P., Vinciguerra S., Agosta F., Janiseck J.M. 2015. Bedding-parallel stylolites in shallow-water limestone successions of the Apulian Carbonate Platform (central-southern Italy). *Italian Journal of Geosciences*, vol. 134, pp. 513-534.
19. Rustichelli A., Di Celma C., Tondi E., Bianucci G. (2016). Deformation within the Pisco Basin sedimentary record (southern Peru): Stratabound orthogonal vein sets and their impact on fault development. *Journal of South American Earth Sciences*, vol. 65, p. 79-100, ISSN: 0895-9811, doi: 10.1016/j.jsames.2015.11.002.
20. Panza E., Agosta F., Rustichelli A., Zambrano M., Tondi E., Prosser G., Giorgioni M., Janiseck J.M. 2016. Fracture stratigraphy of shallow-water, layered limestone rocks: inferences on the fluid flow properties of fractured tight carbonate reservoirs. *Marine and Petroleum Geology*, vol. 73, pp. 350-370.
21. Rustichelli A., Di Celma C., Tondi E., Baud P., Vinciguerra S. 2016. Fibrous gypsum veins as diffuse features and within fault zones: their impact on geofluid circulation and storage. *Journal of The Geological Society*, vol. 173, pp. 405-418.
22. Rustichelli A., Di Celma C., Tondi E., Bianucci G. 2016. Deformation within the Pisco Basin sedimentary record (southern Peru): Stratabound orthogonal vein sets and their impact on fault development. *Journal of South American Earth Sciences*, vol. 65, pp. 79-100.
23. Rustichelli A., Torrieri S., Tondi E., Laurita S., Strauss Cristoph, Agosta F., Balsamo F. 2016. Fracture characteristics in Cretaceous platform and overlying ramp carbonates: An outcrop study from Maiella Mountain (central Italy). *Marine and Petroleum Geology*, vol. 76, pp. 68-87.
24. Tondi E., Rustichelli A., Cilona A., Balsamo F., Storti F., Napoli G., Agosta F., Renda P., Giorgioni M. 2016. Hydraulic properties of fault zones in porous carbonates, examples from central and southern Italy. *Italian Journal of Geosciences*, vol. 135, pp. 68-79.
25. Zambrano M., Tondi E., Korneva I., Panza E., Agosta F., Janiseck J.M. Giorgioni M. 2016. Fractured properties analysis and Discrete Fracture Network modelling of faulted tight limestones, Murge Plateau, Italy. *Italian Journal of Geosciences*, vol. 135, pp. 55-67.
26. Arzilli F., Cilona A., Mancini L., Tondi E. 2016. Using synchrotron X-ray microtomography to characterize the pore network of porous rocks: a case study on carbonates. *Advances in Water Resources*, Vol. 95, pp. 254–263.
27. Di Celma C., Rustichelli A., Tondi E., 2016. Geology and sedimentary facies of the Pliocene succession of the Baronia Mountains (Ariano Basin, southern Italy), in *Journal of Maps*, 12, 61-76.
28. Korneva I., Tondi E., Balsamo F., Agosta F., 2016. Deformation mechanisms and petrophysical properties of chert and limestone fault rocks within slope-to-basin succession (Gargano Promontory, southern Italy), in *Tectonophysics*, 690, 52-62.
29. Korneva I., Tondi E., Jablonska D., Di Celma C., Alsop I., Agosta F. 2016. Distinguishing tectonically- and gravity-driven synsedimentary deformation structures along the Apulian platform margin (Gargano Promontory, southern Italy). *MARINE AND PETROLUUM GEOLOGY*, vol. 73, pp. 479-491.
30. Laurita S. , Agosta F., Cavalcante F., Rustichelli A., Janiseck J.M. 2016. Shearing of syn-sedimentary carbonate breccia along strike-slip faults, Altamura Fm., Southern Italy. *ITALIAN JOURNAL OF GEOSCIENCES*, vol. 135, pp. 41-54.
31. M. Zambrano, E. Tondi, L. Mancini, G. Lanzafame, F. X. Trias, F. Arzilli, M. Materazzi, S. Torrieri (2018). FLUID FLOW SIMULATION AND PERMEABILITY COMPUTATION IN DEFORMED POROUS CARBONATE GRAINSTONES. *ADVANCES IN WATER RESOURCES*, vol. 115, p. 95-111, ISSN: 0309-1708, doi: <https://doi.org/10.1016/j.advwatres.2018.02.016>
32. Jablonská, D., Di Celma, C. N., Alsop, G. I., Tondi, E. (2018). Internal architecture of mass-transport deposits in basinal carbonates: A case study from southern Italy. *SEDIMENTOLOGY*, vol. 65, ISSN: 0037-0746, doi: 10.1111/sed.12420

33. R. Civico, S. Pucci, F. Villani, L. Pizzimenti, P. M. De Martini, R. Nappi, F. Agosta, G. Alessio, L. Alfonsi, M. Amanti, S. Amoroso, D. Aringoli, E. Auciello, R. Azzaro, S. Baize, S. Bello, L. Benedetti, A. Bertagnini, G. Binda, M. Bisson, A. M. Blumetti, L. Bonadeo, P. Boncio, P. Bornemann, S. Branca, T. Braun, F. Brozzetti, C. A. Brunori, P. Burrato, M. Caciagli, C. Campobasso, M. Carafa, F. R. Cinti, D. Cirillo, V. Comerci, L. Cucci, R. De Ritis, G. Deiana, P. Del Carlo, L. Del Rio, A. Delorme, P. Di Manna, D. Di Naccio, L. Falconi, E. Falcucci, P. Farabollini, J. P. Faure Walker, F. Ferrarini, M. F. Ferrario, M. Ferry, N. Feuillet, J. Fleury, U. Fracassi, C. Frigerio, F. Galluzzo, R. Gambillara, G. Gaudiosi, H. Goodall, S. Gori, L. C. Gregory, L. Guerrieri, S. Hailemikael, F. Iezzi, C. Invernizzi, D. Jablonská, E. Jacques, H. Jomard, V. Kastelic, Y. Klinger, G. Lavecchia, F. Leclerc, F. Liberi, A. Lisi, F. Livio, L. Lo Sardo, J. P. Malet, M. T. Mariucci, M. Materazzi, F. Mazzarini, K. J. W. McCaffrey, A. M. Michetti, Z. K. Mildon, P. Montone, M. Moro, R. Nave, M. Odin, B. Pace, S. Paggi, N. Pagliuca, G. Pambianchi, D. Pantosti, A. Patera, E. Pérouse, G. Pezzo, L. Piccardi, P. P. Pierantoni, M. Pignone, S. Pinzi, E. Pistolesi, J. Point, A. Pozzi, M. Proposito, C. Puglisi, I. Puliti, T. Ricci, L. Ripamonti, M. Rizza, G. P. Roberts, M. Roncoroni, V. Sapia, M. Saroli, A. Sciarra, O. Scotti, G. Skupinski, A. Smedile, G. Tarabusi, S. Tarquini, S. Terrana, J. Tesson, E. Tondi, A. Valentini, R. Vallone, J. Van der Woerd, P. Vannoli, A. Venuti, E. Vittori, T. Volatili, L. N. J. Wedmore, M. Wilkinson, M. Zambrano (2018). Surface ruptures following the 30 October 2016 Mw 6.5 Norcia earthquake, central Italy. *Journal of Maps*, vol. 14, p. 151-160, ISSN: 1744-5647, doi: 10.1080/17445647.2018.1441756
34. Zambrano, M., TONDI, Emanuele, Mancini, L., Arzilli, F., Lanzafame, G., MATERAZZI, Marco, Torrieri, S., ZAMBRANO CARDENAS, MILLER DEL CARMEN (2017). 3D Pore-network quantitative analysis in deformed carbonate grainstones. *Marine and Petroleum Geology*, vol. 82, p. 252-264, ISSN: 0264-8172, doi: 10.1016/j.marpetgeo.2017.02.001
35. Andrea Rustichelli, Alessandro Iannace, Emanuele Tondi, Claudio Di Celma, Antonino Ciona, Maurizio Giorgioni, Mariano Parente, Monica Girundo, Chiara Invernizzi (2017). Fault-controlled dolomite bodies as palaeotectonic indicators and geofluid reservoirs: new insights from Gargano Promontory outcrops. *Sedimentology*, vol. 64, p. 1871-1900, ISSN: 0037-0746, doi: 10.1111/sed.12378

Emanuele Tondi

Camerino, 23/05/2018

