



PERSONAL DETAILS

Name **Daniele Carlo Cesare Castelli**
Year of Birth 1956
Address [office] Dipartimento di Scienze della Terra, Via Valperga Caluso 35, I-10125 Torino
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Nationality Italian

EDUCATION

Date 1987
Title **PhD Earth Sciences**
Subject Petrology of HP impure marbles from the Sesia-Lanzo Zone, Western Italian Alps
Institution Consorzio Dottorato Scienze della Terra, I Ciclo, Università di Cagliari, Genova e Torino

Date 1981
Title **Master's degree in Geology**
Subject Geology and petrology of the M. Emilius Austroalpine Klippe and underlying metaophiolites (Aosta Valley)
Institution Università di Torino

CURRENT POSITION

Date March 2005 - present
Position **Full professor**
Activity Research and teaching
Subject Petrology and Petrography (SC 04/A1, SSD GEO/07)
Institution Università di Torino

PREVIOUS POSITIONS

Date Nov 1998 to Feb 2005
Position **Associate professor**
Activity Research and teaching
Subject Petrology and Petrography
Institution Università di Torino

Date March 1987 to Oct 1998
Position **Researcher**
Activity Research and teaching
Subject Petrology and Petrography
Institution Università di Torino

FELLOWSHIPS	
Date	from 1985 to 1986
	Academic guest
Institution	Institute of Mineralogy and Petrography, ETH - Federal Institutes of Technology, Zuerich, Switzerland
Date	2002
	Invited professor
Institution	Department of Geology and Mineralogy, Kyoto University, Japan
RESEARCH ACTIVITY	
General field	Petrography and petrology
Major interest	Reconstruction of metamorphic and magmatic processes within crystalline basements of mountain belts ((Alps, Himalaya, China and Antarctica) by integrating field and laboratory data with thermodynamic modeling of mineral phase relationships.
General field	Applied petrography
Major interest	Application of petrographic techniques at investigating Cultural Heritage stone materials and lichen-rock interaction. Study, preservation and cultural development of both Geological and Archaeological (mostly mining) Heritages in the Alps.
SUPERVISION	
	2 PhD students, Earth Science Program, Università di Torino; 1 PhD student, Heritage Science National PhD Program, Università La Sapienza, Roma; over 15 Master students, 5-years Master's degree in Conservation and Restoration of Cultural Heritage, Università di Torino; over 30 Master students, Master's degree in Geology, Università di Torino.
SELECTED TEACHING ACTIVITY	
Date	from 2008/2009 to present
Course	Petrography
Institution	Bachelor's degree in Geology, Università di Torino
Date	from 2004/2005 to present
Course	Petrogenesis
Institution	Master's degree in Geology, Università di Torino
Date	from 2007/2008 to present
Course	Stone Materials in Cultural Heritage
Institution	5-years Master's degree in Conservation and Restoration of Cultural Heritage, Università di Torino
Date	from 2001/2002 to present
Course	Phase Petrology
Institution	PhD Program in Earth Sciences, Università di Torino
Date	from 2020/2021 to present
Course	Petrography and Geophysics for Archaeological Heritage
Institution	Specialization school in Archaeological Heritage "Giorgio Gullini", Università di Torino
Date	from 2002/2003 to 2008/2009

Course	Petrography
Institution	Bachelor's degree in Sciences and Technology for Cultural Heritage, Università di Torino
Date	from 1993/1994 to 2008/2009
Course	Petrography
Institution	Bachelor's degree in Natural Sciences, Università di Torino
Date	2009
Course	Quantitative petrologic tools for metamorphic phase equilibria modeling
Institution	Geotalia Short Course, VII Earth Sciences Forum, Rimini (I)
Date	2002
Course	Subsolidus phase diagrams computations and calculators
Institution	Short Course, Kyoto University, Dept. Earth Sciences
INVITED LECTURES AND KEYNOTES	
Date	1994
Short Course/School	Physical chemistry of mineral reactions
Institution	SIMP (Italian Society of Mineralogy and Petrology) - National Group of Mineralogy
Date	1998
Short Course/School	Subsolidus processes in rocks and Earth materials
Institution	SIMP (Italian Society of Mineralogy and Petrology) - National Group of Petrography
Date	2001
Short Course/School	Phase equilibria and geothermobarometry
Institution	SIMP (Italian Society of Mineralogy and Petrology) - National Group of Petrography
Date	2008
Workshop	The Deep Carbon Cycle
Institution	"c2c" European research network, ETH Zuerich, CH
INSTITUTIONAL RESPONSABILITIES	
Date	from Oct 2021 to present
Appointment	Head of SUSCOR
Institution	SUSCOR - University Structure in Sciences for Conservation, Restoration, Exploitation of Cultural Heritage, Università di Torino
Date	from Oct 2019 to Sept 2021
Appointment	President of Master's program
Institution	5-years Master's program in Conservation and Restoration of Cultural Heritage Università di Torino
Date	from Jan 2012 to Sept 2018
Appointment	Head of Department
Institution	Department of Earth Sciences, Università di Torino
Date	from Oct 2012 to Sept 2018
Appointment	Earth Sciences delegate
Institution	Academic Senate, Università di Torino
Date	from Oct 2009 to Dec 2011

Appointment Institution	Head of Department Department of Mineralogical and Petrological Sciences, Università di Torino
Date Appointment Institution	from Oct 2009 to Dec 2011 PhD Program Coordinator Earth Sciences PhD program, Università di Torino
FURTHER ACADEMIC RESPONSABILITIES	
Date Appointment Institution	from Oct 2021 to present Head of Classe di Scienze fisiche, matematiche e naturali Accademia delle Scienze, Torino
Date Appointment Institution	from 2013 to present IEC Italian delegate IEC - International Eclogite Conference Coordinating Committee
Date Appointment Institution	from Jan 2020 to Dec 2021 President of SIMP SIMP - Italian Society of Mineralogy and Petrology
Date Appointment Institution	from Jan 2018 to Dec 2019 President of GNP GNP - Italian Group of Petrography (in the frame of SIMP, Italian Society of Mineralogy and Petrology)
Date Appointment Institution	2013 to 2015 President of IEC IEC - International Eclogite Conference
EVALUATION COMMISSIONS	
	<p>President/member of commissions for:</p> <ul style="list-style-type: none"> - Full professor positions (Univ. Padova, 2008; Univ. Milano Bicocca, 2019); - Associate professor positions (Univ. Milano Statale, 2018; Univ. Padova, 2018; Univ. Torino, 2018; Univ. Milano Bicocca, 2019; Univ. Pavia, 2019; Univ. Torino, 2019); - Researcher positions [RUTDB] (Univ. Milano Statale, 2018; Univ. Milano Bicocca, 2020; Univ. Cagliari, 2023); - Researcher positions [RUTDA] (Univ. Torino, 2020, 2022); - Researcher positions [RUTI] (Univ. Cagliari, 2004). <p>President of commissions for positions of:</p> <ul style="list-style-type: none"> - Dirigente di ricerca (CNR-National Research Council, 2018); - Direttore (Istituto di Geoscienze e Georisorse, CNR-National Research Council, 2019).
SCIENTIFIC PRODUCTION	
	<p>Some 100 papers, book chapters, scientific reports, geological maps, excursion guidebooks; including 63 papers indexed in Scopus. More than 110 communications at national and international congress.</p> <p>Scopus H-index 26, 1678 citations (average citations per paper: 27, highest citations paper: 127).</p>

Selected publications

- Cavaleri, T., Legnaioli, S., Lozar, F., Comina, C., Poole, F., Pelosi, C., Spoladore A., Castelli, D., Palleschi, V. (2021). A Multi-Analytical Study of an Ancient Egyptian Limestone Stele for Knowledge and Conservation Purposes: Recovering Hieroglyphs and Figurative Details by Image Analysis. *Heritage*, 4(3), 1193-1207.
- Negri, A., Nervo, M., Di Marcello, S., & Castelli, D. (2021). Consolidation and Adhesion of Pictorial Layers on a Stone Substrate. The Study Case of the Virgin with the Child from Palazzo Madama, in Turin. *Coatings*, 11(6), 624.
- Maffeis, A., Ferrando, S., Connolly, J. A., Groppo, C., Frezzotti, M. L., & Castelli, D. (2021). Thermodynamic analysis of HP-UHP fluid inclusions: The solute load and chemistry of metamorphic fluids. *Geochimica et Cosmochimica Acta*, 315, 207-229.
- Ghignone S.; Borghi A.; Balestro G.; Castelli D.; Gattiglio M.; Groppo C. (2020) HP-tectono-metamorphic evolution of the Internal Piedmont Zone in Susa Valley (Western Alps): New petrologic insight from garnet+chloritoid –bearing micaschists and Fe-Ti metagabbro. *Journal of Metamorphic Geology*, 39(4), 391-416.
- Dino, G. A., Borghi, A., Castelli, D., Canali, F., Corbetta, E., & Cooper, B. (2019). The Candoglia marble and the “veneranda fabbrica del duomo di milano”: A renowned georesource to be potentially designed as global heritage stone. *Sustainability*, 11(17), 4725.
- Moroni, M., Rossetti, P., Naitza, S., Magnani, L., Ruggieri, G., Aquino, A., Tartarotti, P., Franklin, A., Ferrari, E., Castelli, D., Oggiano, G., Secchi, F. (2019). Factors controlling hydrothermal nickel and cobalt mineralization—Some suggestions from historical ore deposits in Italy. *Minerals*, 9(7), 429.
- Rolfo, F., Groppo, C., Balestro, G., Castelli, D., Ferrando, S., & Mosca, P. (2019). Monviso—un itinerario geoturistico attraverso l'antico oceano Tetide. *in Tutti i colori di una Regione. 13 itinerari geologici in Piemonte. Museo Regionale di Scienze Naturali*, 19-42.
- Balestro, G.; Festa, A.; Borghi, A.; Castelli, D.; Gattiglio, M.; Tartarotti, P. (2018) Role of Late Jurassic intra-oceanic structural inheritance in the Alpine tectonic evolution of the Monviso meta-ophiolite Complex (Western Alps). *Geological Magazine*, 155(2), 233-249.
- Storta, E., Borghi, A., & Castelli, D. (2018). Un approccio geologico per lo studio dei materiali lapidei da costruzione della Casa della Caccia Antica. *in Pompeiana Fragmenta. Conoscere e conservare (a) Pompei. Indagini archeologiche, analisi diagnostiche e restauri. Hapax Editore*, 79-84.
- Ferrando, S., Groppo, C., Frezzotti, M. L., Castelli, D., & Proyer, A. (2017). Dissolving dolomite in a stable UHP mineral assemblage: Evidence from Cal-Dol marbles of the Dora-Maira Massif (Italian Western Alps). *American Mineralogist*, 102(1), 42-60.
- Groppo, C.; Rolfo, F.; Castelli, D.; Mosca, P. (2017) Metamorphic CO₂ Production in Collisional Orogens: Petrological Constraints from Phase Diagram Modeling of Himalayan, Scapolite-bearing, Calc-silicate Rocks in the NKC(F)MAS(T)-HC system. *Journal of Petrology*, 58(1), 53-84.
- Elia, D.; Meirano, V.; Facchinetti, L.; Groppo, C.; Ferrando, S.; Castelli, D.; Ghedin, L. (2016). Macine manuali dalla villa romana di Costigliole Saluzzo (CN): contesti, morfologia, analisi petrografica, interventi di restauro. *Orizzonti*, XVII, 89-101.
- Groppo, C., Ferrando, S., Castelli, D., Elia, D., Meirano, V., & Facchinetti, L. (2016). A possible new UHP unit in the Western Alps as revealed by ancient Roman quern-stones from Costigliole Saluzzo, Italy. *European Journal of Mineralogy*, 28(6), 1215-1232.
- Borghi, A.; Angelici, D.; Borla, M.; Castelli, D.; D'Atri, A.; Gariani, G.; Lo Giudice, A.; Martire, L.; Re, A.; Vaggelli, G. (2015) The stones of the Statuary of the Egyptian Museum of Turin: geologic and petrographic characterization. *Rendiconti Lincei. Scienze fisiche e naturali*, 26(4), 385-398.
- Borghi, A., Berra, V., d'Atri, A., Dino, G. A., Gallo, L. M., Giacobino, E., Martire, L., Massaro, G., Vaggelli, G., Bertok, C., Castelli, D., Costa, E., Ferrando, S., Groppo, C., Rolfo, F. (2015). Stone materials used for monumental buildings in the historical centre of Turin (NW Italy): architectural survey and petrographic characterization of Via Roma. *Geological Society, London, Special Publications*, 407(1), 201-218.
- Rolfo, F., Balestro, G., Borghi, A., Castelli, D., Ferrando, S., Groppo, C., Mosca, P., Rossetti, P. (2015). The Monviso Ophiolite Geopark, a symbol of the Alpine Chain and geological heritage in Piemonte, Italy. *In Engineering Geology for Society and Territory-Volume 8* (pp. 239-243). Springer, Cham.
- Rossi M.; Gattiglia A.; Castelli D.; Nisbet R.; Re Fiorentin G.; Rossetti P.; Chiappino C.; Conz E.; Dalmasso F.; de Vingo P.; Gomez Serito M.; Patria L.; Porticelli F.; Rebay G.; Riccardi M.P.; Silvestro G. (2015). Le complexe minier médiéval de Punta Corna (Usseglio, Turin, Italie). *Minaria Helvetica*, 35, 3-30.
- Scarcella, A. V., Cardinali, M., Castelli, D. C. C., Piervittori, R., Poli, T., & Sprocati, A. R. (2014). Studio sperimentale di sistemi per il bioconsolidamento di manufatti lapidei di natura calcarea. *In I batteri nel restauro - I principi, l'esperienza di laboratorio e i casi studio applicati dalla biopulitura al bioconsolidamento* (pp. 131-148). Il Prato.

- Favero-Longo, S.E.; Turci, F.; Fubini, B.; Castelli, D.; Piervittori, R. (2013) Lichen deterioration of asbestos and asbestiform minerals of serpentinite rocks in Western Alps. *International Biodeterioration & Biodegradation*, 84, 342-350.
- Groppo C.; Rolfo F.; Castelli D.; Connolly J.A.D. (2013) Metamorphic CO₂ production from calc-silicate rocks via garnet-forming reactions in the CFAS–H₂O–CO₂ system. *Contributions to Mineralogy and Petrology*, 146(6), 1655-1675.
- Proyer, A., Rolfo, F., Zhu, Y. F., Castelli, D., & Compagnoni, R. (2013). Ultrahigh-pressure metamorphism in the magnesite+ aragonite stability field: evidence from two impure marbles from the Dabie–Sulu UHPM belt. *Journal of Metamorphic Geology*, 31(1), 35-48.
- Rossetti P.; Castelli D.; Gattiglia A.; Rossi M. (2013) Nuovi ritrovamenti di mineralizzazioni e di lavori minerari nei valloni di Servin e del Masòc (Usseglio, valli di Lanzo): primi dati geologico-petrografici e microanalitici. *in Terre rosse, pietre verdi e blu cobalto Miniere a Usseglio. Seconda raccolta di studi. Museo Civico Alpino «Arnaldo Tazzetti»*, 2, 215-228.
- Rossi, M., Gattiglia, A., Castelli, D., Chiappino, C., Nisbet, R., Patria, L., Porticelli, F., Re Fiorentin, G., Rossetti, P. (2013) The ancient mines of Usseglio (Torino, Italy): multi-year programme of recording, study, preservation and cultural development of the archaeological mining heritage in an alpine valley. *Proceedings 16th International Congress of Speleology*, 2, 242-246.
- Borghi, A., Castelli, D. C. C., Costa, E., D'Atri, A. R., Dino, G. A., Favero Longo, S. E., Ferrando S.; Forno, G.; Gallo, L.M., Gianotti, F.; Giardino, M., Groppo, C., Martire, L., Piervittori, R., Rolfo, F., Rossetti P., Vaggelli, G. (2012). Historic ornamental stones from the Western Alps and their use in Cultural Heritage. *In Geoheritage: protecting and sharing (Vol. 3, pp. 35-37)*.
- Compagnoni, R., Rolfo, F., Castelli, D. (2012). Jadeitite from the Monviso meta-ophiolite, western Alps: occurrence and genesis. *European Journal of Mineralogy* 24.2: 333-343.
- Rolfo F.; Cadoppi P.; Balestro G.; Belluso E.; Benna P.; Borghi A.; Cámara F.; Castelli D.; Favero-Longo S.E.; Ferrando S.; Festa A.; Forno M.G.; Gattiglio M.; Gianotti F.; Giardino M.; Groppo C.; Mosca P.; Piervittori R.; Rossetti P. (2012) The Monviso massif and the Cottian Alps as symbols of the Alpine chain and geological heritage in Piemonte, Italy. *In Geoheritage: protecting and sharing (Vol. 3, pp. 170-171)*.
- Castelli, D., Gaggero, L., Mazzoleni, P., & Rocchi, S. (2011). The classification of igneous, sedimentary and metamorphic rocks and the UNI/CEN terminology of natural stones. *in Rocce e Minerali Industriali*, Aracne Editrice, 65-73.
- Favero-Longo S.E.; Gazzano C.; Girlanda M.; Castelli D.; Tretiach M.; Baiocchi C.; Piervittori R. (2011) Physical and chemical deterioration of silicate and carbonate rocks by meristematic microcolonial fungi and endolithic lichens (Chaetothryiomycetidae) *Geomicrobiology Journal*, 28(8), 732-744.
- Gattiglia, A., Rossi, M., Castelli, D. C. C., & Rossetti, P. (2011). Punta Corna e Spirito Benedetto Nicolis di Robilant: "speranza" e "fortuna" di un ispettore generale delle miniere sabaude (1757). *in Terre rosse, pietre verdi e blu cobalto. Miniere a Usseglio. Prima raccolta di studi. Museo Civico Alpino "Arnaldo Tazzetti"*, 1, 108-128.
- Groppo C.; Castelli D. (2010) Prograde P-T Evolution of a Lawsonite Eclogite from the Monviso Meta-ophiolite (Western Alps): Dehydration and Redox Reactions during Subduction of Oceanic FeTi-oxide Gabbro. *Journal of Petrology*, 51(12), 2489-2514.
- Castelli, D., Rolfo, F., Groppo, C., & Compagnoni, R. (2007). Impure marbles from the UHP Brossasco-Isasca Unit (Dora-Maira Massif, western Alps): evidence for Alpine equilibration in the diamond stability field and evaluation of the X (CO₂) fluid evolution. *Journal of Metamorphic Geology*, 25(6), 587-603.
- Turci, F., Favero-Longo, S. E., Tomatis, M., Martra, G., Castelli, D., Piervittori, R., & Fubini, B. (2007). A biomimetic approach to the chemical inactivation of chrysotile fibres by lichen metabolites. *Chemistry—A European Journal*, 13(14), 4081-4093.
- Borghi, A., Callegari, E., Castelli, D. C. C., Damicone, E., Fiora, L., Vaggelli, G., & Vigna, L. (2006). Le belle pietre d'Egitto. *in Riflessi di pietra*, Skira, 151 p.
- Favero-Longo, S. E., Castelli, D., Salvadori, O., Belluso, E., Piervittori, R. (2005). Pedogenetic action of the lichens *Lecidea atrobrunnea*, *Rhizocarpon geographicum* gr. and *Sporastatia testudinea* on serpentinitized ultramafic rocks in an alpine environment. *International Biodeterioration & Biodegradation*, 56(1), 17-27.
- Favero-Longo, S. E., Turci, F., Tomatis, M., Castelli, D., Bonfante, P., Hochella, M. F., Piervittori, R., Fubini, B. (2005). Chrysotile asbestos is progressively converted into a non-fibrous amorphous material by the chelating action of lichen metabolites. *Journal of Environmental Monitoring*, 7(8), 764-766.