

CURRICULUM VITAE ET STUDIORUM

MARIO PARISE

Born on 24th of March 1965

Education and Titles

1988: Graduated with honors in Geology at the Faculty of Sciences of the University of Naples.

1990-1994: recipient of several grants from the National Research Council of Italy; part of the grants were carried out in cooperation with the U.S. Geological Survey, Golden, Colorado.

1994-1999: Research Geologist (5-years contract) at the National Research Council of Italy.

1999 to present: Research Geologist at the National Research Council, Institute of Research for the Hydrogeological Protection, Bari.

Teaching activity

1999-2001: supporting activities in the course of Slope Stability at the Technical University of Bari (Taranto facility) for the degree in Environmental Engineering.

2004-2006: contract professor in Slope Stability at the Technical University of Bari (Taranto facility) for the degree in Environmental Engineering.

2000 to present: seminars at different Italian Universities (Naples, Bari, Potenza, Taranto).

2005 to present: tutoring of PhD students at several Italian universities.

Memberships and Scientific Responsibilities

- 2001-2003: Coordinator of the scientific activities at the Speleological Museum "Franco Anelli" at the Castellana Caves.
- 2001: Organizer and convener of the round table "Water of the Tird Millennium: Management and safeguard of aquifers in karst", Castellana-Grotte, 03/03/2001.
- 2001-2005: Member of the Technical Committee of the Castellana Caves.
- 2001: Organizer, convener and member of the Scientific Committee of the 3rd Congress of Apulian Speleology, Castellana-Grotte, 06-08/12/2002.
- 2002 to present: Member of the Commission for Karst Hydrogeology and Speleogenesis of the International Union of Speleology.
- 2002-2004: Italian Scientific Responsible of the bilateral Project between Italy and Albania "Karst ecosystems of Albania – Values and risks – Problems of management for a sustainable development", Ministry of Foreign Affairs (Sector: Environment, Energy and Territory, AM6).
- 2003 to present: organizer and convener of several international workshops and conferences (European Geosciences Union Assemblies, Geological Society of America Meetings, Italian Forums of Earth Sciences).
- 2003 to present: coordinator of the Project "The map of ancient underground aqueducts" by the Italian Speleological Society.
- 2003-2004: scientific responsible of the Cuban-Italian speleological expedition "Santo Tomàs 2003", December 2003 – January 2004, Viñales, Cuba.

- 2007: scientific responsible of the Cuban-Italian speleological expedition “Marmo Platano 2007”, June 2007, Muro Lucano, Italy.
- 2008 to present: Member of several Scientific Committees of International Conferences and Workshops.
- 2009 to present: President of the Commission on Artificial Cavities of the International Union of Speleology.
- 2009 to present: Scientific Responsible of several projects between CNR-IRPI and different public administrations and private companies.
- 2009 to present: Scientific coordinator of the Apulian Speleological Federation.
- 2010-2012: Coordinator of the CAT-1 Project “Application of interferometric techniques to the hazard assessment of sinkholes”, by the European Space Agency.

Research Activity

Since 1990, he has developed research mainly into the geological and geomorphological analysis of slope movements. Much of his research deals with identification of the areas susceptible to different types of slope movement, with a particular focus given to multi-temporal analysis, aimed at understanding the likely evolution of slopes, even in relationship with anthropogenic activities, and/or as a consequence of specific triggering events (rainstorm, earthquakes, etc.). For several sites in southern Italy, he has outlined a framework of the influence of weathering in the predisposition of slope movements. He has also contributed to the analysis of rapid landslides (debris avalanches, rock avalanches) in different geological settings in Italy and abroad, and to studying the occurrence of debris flows and erosional processes in areas recently affected by wildfires. He has studied various landslides in Italy and the United States of America, developing an expertise in the recognition and investigation of slope failures, production of thematic maps, also collaborating in the interpretation of monitoring data and in slope stability analyses.

Since 2002 he is working in the field of karst research, focusing on the evaluation of the natural and anthropogenic hazards occurring in karst territories, with particular regard to sinkholes. Another interest is on artificial cavities, excavated by man in different epochs for a variety of purposes: on this topic, he has been working on several aspects, from exploration, to surveying, integrated geological-archeological studies, stability analysis. Since 2003 he is the coordinator of the Project “The map of ancient underground aqueducts” by the Italian Speleological Society. All of these researches is carried out also thanks to the caving activity in which he is active since 1998.

He is the author of over one hundred papers published on international journals and proceedings of international conferences. He has given several presentations in international symposium and workshops. He has acted as Guest Editor in more than 10 special issues for ISI international journals, and has published two books with the Geological Society of London. Since 2002 he reviews papers for several journals, including *Geomorphology*, *Engineering Geology*, *Earth Surface Processes and Landforms*, *Natural Hazards and Earth System Sciences*, *Environmental Management* and *Natural Hazards*.

SELECTION OF THE MOST SIGNIFICANT PUBLICATIONS ON KARST AND ARTIFICIAL CAVITIES

Karst

- **PARISE M.**, 2003, *Flood history in the karst environment of Castellana-Grotte (Apulia, southern Italy)*. Natural Hazards and Earth System Sciences, vol. 3, no. 6, p. 593-604.
- **PARISE M.**, FEDERICO A., DELLE ROSE M. & SAMMARCO M., 2003, *Karst terminology in Apulia (southern Italy)*. Acta Carsologica, vol. 32, no. 2, p. 65-82.
- **PARISE M.** & PASCALI V., 2003, *Surface and subsurface environmental degradation in the karst of Apulia (southern Italy)*. Environmental Geology, vol. 44, p. 247-256.
- DELLE ROSE M., FEDERICO A. & **PARISE M.**, 2004, *Sinkhole genesis and evolution in Apulia, and their interrelations with the anthropogenic environment*. Natural Hazards and Earth System Sciences, vol. 4, p. 747-755.
- LOLLINO P., **PARISE M.** & REINA A., 2004, *Numerical analysis of the behavior of a karst cavern at Castellana-Grotte, Italy*. Proceedings 1st International UDEC/3DEC Symposium, Bochum (Germany), 29 September – 1 October 2004, p. 49-55.
- **PARISE M.** & TROCINO A., 2005, *Gypsum karst in the Crotona province (Calabria, southern Italy)*. Acta Carsologica, vol. 34, no. 2, 369-382.
- **PARISE M.** & VALDES SUAREZ M., 2005, *The show cave at "Gran Caverna de Santo Tomás" (Pinar del Rio province, Cuba)*. Acta Carsologica, vol. 34, no. 1, 135-149.
- SAMMARCO M. & **PARISE M.**, 2005, *Grotte Cipolliane in Salento (Apulia, southern Italy): karst geomorphology and the filling deposits*. Ipogea, n. 4, p. 23-36.
- CALÒ F. & **PARISE M.**, 2006, *Evaluating the human disturbance to karst environments in southern Italy*. Acta Carsologica, vol. 35, no. 2, 47-56.
- **PARISE M.**, 2006, *Geomorphology of the Canale di Pirro karst polje (Apulia, southern Italy)*. Zeitschrift für Geomorphologie, N.F., suppl. vol. 147, 143-158.
- **PARISE M.** & GUNN J. (editors), 2007, *Natural and anthropogenic hazards in karst areas: Recognition, Analysis and Mitigation*. Geological Society, London, Special Publications no. 279, 202 pp.
- **PARISE M.**, QIRIAZI P. & SALA S., 2008, *Evaporite karst of Albania: main features and cases of environmental degradation*. Environmental Geology, vol. 53, no. 5, p. 967-974.
- **PARISE M.**, DE WAELE J. & GUTIERREZ F., 2008, *Engineering and environmental problems in karst – An introduction*. Engineering Geology, vol. 99, p. 91-94.
- BRUNO E., CALCATERRA D. & **PARISE M.**, 2008, *Development and morphometry of sinkholes in coastal plains of Apulia, southern Italy. Preliminary sinkhole susceptibility assessment*. Engineering Geology, vol. 99, p. 198-209.
- BRINKMANN R., **PARISE M.** & DYE D., 2008, *Sinkhole distribution in a rapidly developing urban environment: Hillsborough County, Tampa Bay area, Florida*. Engineering Geology, vol. 99, p. 169-184.
- **PARISE M.**, 2008, *Rock failures in karst*. In: CHENG Z., ZHANG J., LI Z., WU F. & HO K. (Eds.), *Landslides and Engineered Slopes*. Proc. 10th International Symposium on Landslides, Xi'an (China), June 30 – July 4, 2008, vol. 1, 275-280.
- NORTH L.A., VAN BEYNEN P.E. & **PARISE M.**, 2009, *Interregional comparison of karst disturbance: West-central Florida and southeast Italy*. Journal of Environmental Management, vol. 90, no. 5, p. 1770-1781.
- FARFAN H., DIAS C., **PARISE M.** & ALDANA C., 2010, *Scenarios of groundwater pollution in a karst watershed: a case study in the Pinar del Rio province at Cuba*. In: CARRASCO F., LA MOREAUX J.W., DURAN VALSERO J.J. & ANDREO B. (eds.), *Advances in research in karst media*. Springer, p. 287-292.
- DEL PRETE S., IOVINE G., **PARISE M.** & SANTO A., 2010, *Origin and distribution of different types of sinkholes in the plain areas of Southern Italy*. Geodinamica Acta, vol. 23 (1/3), p. 113-127.
- **PARISE M.**, PERRONE A., VIOLANTE C., STEWART J.P., SIMONELLI A. & GUZZETTI F., 2010, *Activity of the Italian National Research Council in the aftermath of the 6 April 2009 Abruzzo earthquake: the Sinizzo Lake case study*. Atti 2° Workshop Internazionale "I sinkholes. Gli sprofondamenti catastrofici nell'ambiente naturale ed in quello antropizzato", Roma, 3-4 dicembre 2009, p. 623-641.
- **PARISE M.**, 2010, *Hazards in karst*. In: Bonacci O. (Ed.), *Proceedings International Interdisciplinary Scientific Conference "Sustainability of the karst environment. Dinaric karst and other karst regions"*, Plitvice Lakes (Croatia), 23-26 September 2009, IHP-UNESCO, Series on Groundwater no. 2, p. 155-162.
- DE WAELE J., LAURITZEN S.E. & **PARISE M.**, 2011, *On the formation of dissolution pipes in Quaternary coastal calcareous arenites in Mediterranean settings*. Earth Surface Processes and Landforms, vol. 36, p. 143-157.
- **PARISE M.**, 2011, *Some considerations on show cave management issues in Southern Italy*. In: VAN BEYNEN P.E. (ed.), *Karst management*. Springer, ISBN 978-94-007-1206-5, p. 159-167.
- **PARISE M.** & LOLLINO P., 2011, *A preliminary analysis of failure mechanisms in karst and man-made underground caves in Southern Italy*. Geomorphology, vol. 134 (1-2), p. 132-143.
- DE WAELE J., GUTIERREZ F., **PARISE M.** & PLAN L., 2011, *Geomorphology and natural hazards in karst areas: a review*. Geomorphology, vol. 134 (1-2), p. 1-8.
- **PARISE M.**, 2011, *Surface and subsurface karst geomorphology in the Murge (Apulia, southern Italy)*. Acta Carsologica vol. 40 (1), p.79-93.
- MARGIOTTA S., NEGRI S., **PARISE M.** & VALLONI R., 2012, *Mapping the susceptibility to sinkholes in coastal areas, based on stratigraphy, geomorphology and geophysics*. Natural Hazards, vol. 62 (2), p. 657-676.
- FESTA V., FIORE A., **PARISE M.** & SINISCALCHI A., 2012, *Sinkhole evolution in the Apulian karst of southern Italy: a case study, with some considerations on sinkhole hazards*. Journal of Cave and Karst Studies, vol. 74 (2), p. 137-147.
- DI MAGGIO C., MADONIA G., **PARISE M.** & VATTANO M., 2012, *Karst of Sicily and its conservation*. Journal of Cave and Karst Studies, vol. 74 (2), p. 157-172.
- TAVIANI M., ANGELETTI L., CAMPANI E., CEREGATO A., FOGLINI F., MASELLI V., MORSILLI M., **PARISE M.** & TRINCARDI F., 2012, *Drowned karst landscapes offshore the Apulian Margin (Southern Adriatic Sea, Italy)*. Journal of Cave and Karst Studies, vol. 74 (2), p. 197-212.

- **PARISE M.**, 2012, *Management of water resources in karst environments, and negative effects of land use changes in the Murge area (Apulia)*. Karst Development, vol. 2 (1), p. 16-20.
- DEL VECCHIO U., LO MASTRO F., MAURANO F., **PARISE M.** & SANTO A., 2013, *The Alburni Massif, the most important karst area of southern Italy: history of cave explorations and recent developments*. In: FILIPPI M. & BOSAK P. (Editors), Proceedings 16th International Congress of Speleology, Brno, 21-28 July 2013, vol. 1, p. 41-46.
- CAMPANELLA G., **PARISE M.**, RIZZI A., SAMMARCO M. & TROCINO A., 2013, *Caves in sandstone deposits of the southern Italian Apennines*. In: FILIPPI M. & BOSAK P. (Editors), Proceedings 16th International Congress of Speleology, Brno, 21-28 July 2013, vol. 3, p. 320-325.
- DEL VECCHIO U., LO MASTRO F., MAURANO F. & **PARISE M.**, 2013, *Monti Alburni*. Speleologia, vol. 68, p. 31-35.
- SIVELLI M. & DE WAELE J. (EDS.), ANTONINI G., BELVEDERI G., BURRI E., DEL PRETE S., DEL VECCHIO U., EUSEBIO A., GALEAZZI C., ISCHIA M., LAROCCA F., LO MASTRO F., MARCHESI G., MAROTTA C., MAURANO F., MECCHIA G., MONTI A., PANICHI S., PANNUZZO G., **PARISE M.**, PERISSINOTTO M., PICCINI L., SALVATORI F., SAURO F., SAURO U., TOGNINI P. & VATTANO M., 2013, *A journey across speleological Italy*. Map at 1:1.500.000 scale, enclosed to Speleologia, vol. 68, Società Speleologica Italiana.

Artificial cavities

- DELLE ROSE M., GIURI F., GUASTELLA P., **PARISE M.** & SAMMARCO M., 2006, *Aspetti archeologici e condizioni geologico-morfologiche degli antichi acquedotti pugliesi. L'esempio dell'Acquedotto del Triglio nell'area tarantina*. Opera Ipogea, anno 8, n. 1-2, 33-50.
- **PARISE M.**, 2007, *Il Progetto "La Carta degli Antichi Acquedotti Italiani"*. Opera Ipogea, anno 9, n. 1, 3-16.
- **PARISE M.** (a cura di), 2007, *Bibliografia di base*. Opera Ipogea, anno 9, n. 1, 17-68.
- DEL PRETE S. & **PARISE M.**, 2007, *L'influenza dei fattori geologici e geomorfologici sulla realizzazione di cavità artificiali*. Opera Ipogea, anno 9, n. 2, 3-16.
- BURRI E. & **PARISE M.** 2007, *Speleological survey*. In: VANNINI G. & NUCCIOTTI M. (Editors), *Medieval Petra – Shawbak Project. Archaeological season 2007. Field report 2007*, Amman, December 2007, p. 75-80.
- BURRI E., GERMANI C., MANCINI M., NUCCIOTTI M., **PARISE M.** & VANNINI G., 2009, *Ain al Ragaye: a tunnel for exploitation of natural spring in Shawbak Castle (Jordan)*. Opera Ipogea, vol. 1, p. 61-67.
- **PARISE M.**, 2010, *The impacts of quarrying in the Apulian karst*. In: CARRASCO F., LA MOREAUX J.W., DURAN VALSERO J.J. & ANDREO B. (eds.), *Advances in research in karst media*. Springer, p. 441-447.
- SAMMARCO M., **PARISE M.**, MARTIMUCCI V. & PEPE P., 2010, *The contribution of GPR analysis to knowledge of the cultural heritage in Apulia (southern Italy)*. Proceedings XIII International Conference on Ground Penetrating Radar, Lecce (Italy), 21-25 June 2010, p. 70-76.
- SAMMARCO M. & **PARISE M.**, 2011, *Insediamenti rupestri nel Basso Salento (Lecce, Puglia)*. Atti VII Convegno Nazionale di Speleologia in Cavità Artificiali, Urbino, 4-8 dicembre 2010, Opera Ipogea, n. 1/2, p. 27-36.
- DE GIOVANNI A., MARTIMUCCI V., MARZULLI M., **PARISE M.**, PENTIMONE N. & SPORTELLI D., 2011, *Operazioni di rilievo e analisi preliminare dello sprofondamento in località San Procopio (Barletta) del 2-3 maggio 2010*. Atti VII Convegno Nazionale di Speleologia in Cavità Artificiali, Urbino, 4-8 dicembre 2010, Opera Ipogea, n. 1/2, p. 151-158.
- FIORE A., **PARISE M.** & STEFANELLI D., 2011, *Le cavità artificiali in Puglia nell'adeguamento dei nuovi strumenti urbanistici alla pianificazione stralcio di bacino*. Atti VII Convegno Nazionale di Speleologia in Cavità Artificiali, Urbino, 4-8 dicembre 2010, Opera Ipogea, n. 1/2, p. 201-208.
- FIORE A., MARTIMUCCI V. & **PARISE M.**, 2011, *Nuove opportunità per la conservazione e valorizzazione delle cavità artificiali in Puglia*. Atti VII Convegno Nazionale di Speleologia in Cavità Artificiali, Urbino, 4-8 dicembre 2010, Opera Ipogea, n. 1/2, p. 187-192.
- **PARISE M.**, 2011, *Alcune considerazioni sulle cave sotterranee in Puglia e sulle relative problematiche*. Atti VII Convegno Nazionale di Speleologia in Cavità Artificiali, Urbino, 4-8 dicembre 2010, Opera Ipogea, n. 1/2, p. 217-224.
- DEL PRETE S., GALEAZZI C., GERMANI C., MARTIMUCCI V. & **PARISE M.**, 2011, *Fenomeni di dissesto idrogeologico connessi a cavità sotterranee di origine antropica*. Atti dei Convegni Lincei "Frane e dissesto idrogeologico: consuntivo", X Giornata Mondiale dell'Acqua, Accademia dei Lincei, Roma, 22 marzo 2010, vol. 262, p. 223-232.
- **PARISE M.**, 2012, *Underground aqueducts: a first preliminary bibliography around the world*. Proceedings 3rd IWA Specialized Conference on "Water and Wastewater Technologies in Ancient Civilizations", Istanbul, 22-24 March 2012, p. 65-72.
- **PARISE M.**, MARANGELLA A., MARANÒ P., SAMMARCO M. & SANNICOLA G., 2012, *Ancient hydraulic systems for collection, transport and storage of water in karst settings of southern Italy*. Proceedings 3rd IWA Specialized Conference on "Water and Wastewater Technologies in Ancient Civilizations", Istanbul, 22-24 March 2012, p. 73-80.
- GALEAZZI C., GERMANI C. & **PARISE M.**, 2012, *Gli antichi emissari artificiali dei bacini endoreici*. Opera Ipogea, n. 1, p. 3-10.
- FIORE A., MARTIMUCCI V., **PARISE M.** & SAMMARCO M., 2012, *Artificial caves of Apulia, a poorly exploited cultural heritage*. Geologia dell'Ambiente, n. 3, suppl., Proceedings 7th Int. Symp. ProGEO on the Conservation of the Geological Heritage "Geoheritage: Protecting and Sharing", p. 58-59.
- **PARISE M.**, 2012, *A present risk from past activities: sinkhole occurrence above underground quarries*. Carbonates and Evaporites, vol. 27 (2), p. 109-118.
- LOLLINO P., MARTIMUCCI V. & **PARISE M.**, 2013, *Geological survey and numerical modeling of the potential failure mechanisms of underground caves*. Geosystem Engineering, vol. 16 (1), p. 100-112, DOI 10.1080/12269328.2013.780721.
- **PARISE M.**, 2013, *Introduction to the Proceedings of the International Workshop on Speleology in Artificial Cavities "Classification of the Typologies of Artificial Cavities in the World"*. Opera Ipogea, n. 1, p. 4-8.

- **PARISE M.**, GALEAZZI C., GERMANI C. & SAMMARCO M., 2013, *Hydraulic works: the Map of the Ancient Underground Aqueducts*. Opera Ipogea, n. 1, p. 21-28.
- **PARISE M.**, 2013, *Artificial caves as a possible danger: sinkholes and other effects at the surface*. Opera Ipogea, n. 1, p. 95-102.
- **PARISE M.**, MARANGELLA A., MARANÒ P., SAMMARCO M. & SANNICOLA G., 2013, *Collecting, transporting and storing water in karst settings of southern Italy: some lessons learned from ancient hydraulic systems*. Water Science Technology: Water Supply, vol. 13 (3), p.674-682.
- **PARISE M.**, 2013, *Recognition of instability features in artificial cavities*. In: FILIPPI M. & BOSAK P. (Editors), Proceedings 16th International Congress of Speleology, Brno, 21-28 July 2013, vol. 2, p. 224-229.
- **PARISE M.**, GALEAZZI C., BIXIO R., DIXON M., 2013, *Classification of artificial cavities: a first contribution by the UIS Commission*. In: FILIPPI M. & BOSAK P. (Editors), Proceedings 16th International Congress of Speleology, Brno, 21-28 July 2013, vol. 2, p. 230-235.
- DEL PRETE S. & **PARISE M.**, 2013, *An overview of the geological and morphological constraints in the excavation of artificial cavities*. In: FILIPPI M. & BOSAK P. (Editors), Proceedings 16th International Congress of Speleology, Brno, 21-28 July 2013, vol. 2, p. 236-241.
- **PARISE M.**, DEL PRETE S., GALEAZZI C., GERMANI C. & SAMMARCO M., 2013, *The map of ancient underground aqueducts*. Speleologia, vol. 68, p. 48-49.