Università degli Studi della Basilicata
Dipartimento di Culture Europee e del Mediterraneo:
Architettura, Ambiente, Patrimoni Culturali
(DiCEM)

Curriculum scientifico

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CURRICULUM SCIENTIFICO

Francesco Sdao, laureato con lode in Scienze Geologiche, è Professore Ordinario di Geologia Applicata nella Scuola di Ingegneria dell'Università degli Studi della Basilicata, dove insegna Geologia Applicata.
E' Direttore Vicario della Scuola di Ingegneria, Università della Basilicata.
E' Prorettore per le Relazioni Internazionali dell'Università della Basilicata.
E' Responsabile scientifico del Laboratorio di Geologia Applicata ed Ambientale della Scuola di Ingegneria.
Fa parte del Collegio dei docenti del Dottorato di Ricerca in Ingegneria per l'Innovazione e lo Sviluppo Sostenibile attivato presso la Scuola di Ingegneria dell'Università degli Studi della Basilicata e del Consiglio scientifico della Scuola di Specializzazione in Beni Archeologici dell'Università della Basilicata, Matera.
E' componente del Consiglio Direttivo e Socio Ordinario dell'Accademia Pugliese delle Scienze.
E' stato più volte professore invitato presso il Technological Educational Institute (Greece) e all'Universitat Politecnica de Catalunya di Barcellona, dove ha svolto ricerche nel campo della tutela ambientale e ha tenuto cicli di lezioni e seminari su metodi e modelli innovativi di monitoraggio e di valutazione della pericolosità e dei rischi naturali e antropici.
Ha tenuto numerose conferenze, in importanti università straniere e italiane, su metodi e tecniche innovative per il rischio idrogeologico e valutazioni del rischio (frane, rischio carsico, inquinamento delle acque sotterranee)
E' dal 2007, Earth science Review of new UNESCO World Heritage list, nominato dall'International Union of Geological Science
E' peer reviewer di prestigiose riviste internazionali, tra cui Engineering Geology, Geomorphology Journal, Journal of Cultural Heritage , Environmental Earth Science, Natural Hazard , Geophysics, Journal of

Geophysics and Engineering, Environmental Research Letters , Natural Hazard and Earth System Science.
Le sue ricerche sono principalmente rivolte: 1. alla geomorfologia applicata allo studio e al monitoraggio dell'instabilità dei versanti mediante l'integrazione di tecniche di telerilevamento e di monitoraggio innovative; 2. alla valutazione della pericolosità di frana e al conseguente rischio geologico mediante l'ideazione di metodi mutuati dai modelli di Intelligenza Artificiale, con particolare riferimento alle Reti Neurali Artificiali e alla Fuzzy Logic, ecc; 3. alla messa a punto di modelli di valutazione della vulnerabilità sistemica di aree urbane complesse soggette a rischi naturali combinati; 4. all'idrogeologia applicata allo studio, alla valutazione del rischio di inquinamento e alla tutela ambientale di grandi acquiferi carbonatici presenti nel bacino dl mediterraneo; 5. alla progettazione e all'applicazione di modelli e metodi innovativi per la valutazione e la mitigazione dei rischi naturali in corrispondenza di aree storiche, rupestri ed archeologiche.
E' autore di oltre 170 lavori scientifici in gran parte costituiti da: note e memorie scientifiche pubblicate su riviste internazionali e nazionali (molte delle quali con significativo Impact Factor e con un cospicuo numero di citazioni); da note e memorie nei proceedings di congressi nazionali ed internazionali; da due monografie e da numerosi articoli monografici pubblicati su volumi. Ha altresì realizzato alcune carte geomorfologiche e idrogeologiche. E' stato Editor di alcuni volumi riguardanti tematiche di rischio geologico.

SCIENTIFIC CURRICULUM

Francesco Sdao, graduated with honours in Geological Science, is Full Professor of Engineering Geology and works at School of Engineering of Basilicata University (Italy), where teaches Engineering Geology.
He is Deputy Director of School of Engineering, University of Basilicata.
He is Vice Rector for International Relations of Basilicata University.
He is Head of Laboratory of Engineering Geology and Environment of Engineeering School .
He is a member of board of Professors of the PhD course on "Engineering for Innovation and Sustainable Development activated at the Basilicata University and member of the Scientific Council and professor in the High School in Archaeological Heritage (Basilicata University).
He is member of Directive Board of *Accademia Pugliese delle Scienze*.
He was invited professor at the Department of Natural Resources and Environment of the Technological Educational Institute of Crete (Greece) and the Universitat Politecnica de Catalunia, Barcellona, where he was carried our researches concerning issues of geological and environmental risk and he held some cycles of lectures and seminars on monitoring techniques and models for natural and anthropic hazard and risk assessment.
He gave numerous invited lectures, in various important Foreign and Italian Universities, about innovative methods and techniques for the hydrogeological hazard and risk assessments (landslide, karstic hazard, groundwater pollution).
Since 2007, he is Earth Science Review of new UNESCO World Heritage List, designed by the International Union of Geological Science. He is scientific reviewer of international journal, including Engineering Geology, Geomorphology Journal, Journal of Cultural Heritage , Environmental Earth Science, Natural Hazard , Geophysics, Journal of Geophysics and Engineering, Environmental Research Letters , Natural Hazard and Earth System Science .
His researches are mainly focused to: 1. applied geomorphology for the study and monitoring of slope instability through the integration of innovative techniques of remote sensing and of monitoring; 2. the evaluation of landslide hazard and the consequent geological risk by the use of new methods borrowed from artificial Intelligence models, with particular reference to the analysis of artificial neural networks, fuzzy logic, etc.; 3. the development of models for the evaluation of systemic vulnerability of complex urban areas subject to combined natural risks; 4. applied hydrogeology for the study, for the evaluation of the risk of pollution and environmental protection of large carbonate aquifers in the Mediterranean basin;
5. the design and application of analytic models for assessment and mitigation of landslide risk in correspondence of archaeological and historical sites.

Francesco Sdao have published more than 170 scientific papers, most of which on international journals, in international conference proceedings, in international books. Further, he realized many geomorphological and hydrogeological maps related to some Italian and Greek areas. He was Editor of some volumes concerning geological risk issues.

PUBBLICAZIONI/PAPERS

Principali Pubblicazioni (2013 – 2018)

1. F. CANORA, M.A. MUSTO, F. SDAO (2018): *Groundwater Recharge Assessment in the Carbonate Aquifer System of the Lauria Mounts (Southern Italy) by GIS-Based Distributed Hydrogeological Balance Method*. In: Gervasi O. et al. (eds) Computational Science and Its Applications – ICCSA 2018. ICCSA 2018. Lecture Notes in Computer Science, vol 10961. doi.org/10.1007/978-3-319-95165-2_12, ISBN: 978-3-319-95164-5, [Codice Scopus: 2-s2.0-85049982631], Springer ed, Cham

2. R. MUZZILLO, L. LOSASSO, F. SDAO (2018): *Rockfall Source Areas Assessment in an Area of the Pollino National Park (Southern Italy)*. In: Gervasi O. et al. (eds) Computational Science and Its Applications – ICCSA 2018. Lecture Notes in Computer Science, vol 10962, ISBN978-3-319-95167-6, doi.org/10.1007/978-3-319-95168-3_25, Springer, Codice Scopus: 2-s2.0-85049909880].

3. L. LOSASSO, M. JABOYEDOFF, **F. SDAO** (2017): *Potential rock fall source areas identification and rock fall propagation in the province of Potenza territory using an empirically distributed approach*. **Landslides Journal**, Journal of the International Consortium on Landslides, 10 pp, DOI 10.1007/s10346-017-0807-x, ISSN 1612-510X, Springer-Verlag Berlin Heidelberg, **[Codice Scopus: 2-s2.0-85014567918; WoS: 00041080000004].**

4. L. LOSASSO, F. SDAO, C. RINALDI, D. ALBERICO (2017): Landslide risk analysis along strategic touristic roads in Basilicata (Southern Italy) using the modified RHRS 2.0 method. Proceedings of 17th International Conference on Computational Science and Its Applications, ICCSA 2017, in Lecture Notes in Computer Science, vol. 10404, 761 - 776, ISBN 978-331962391-7 DOI: 10.1007/978-3-319-62392-4_55, Springer Verlag [Codice Scopus: 2-s2.0-85027127943].

5. L. LOSASSO, S. PASCALE , F. SDAO (2017): Landslides Risk Assessment Along Roads: The Transportation Corridors of the "Dolomiti Lucane" (Basilicata). Advancing Culture of Living with Landslides. M. Mikoš et al. (eds.), Proceedings of WLF 4, 2017, vol. 4, 661 – 667 DOI: 10.1007/978-3-319-53485-5_76, ISBN: 978-3-319-53485-5, SPRINGER, Slovenia, Maggio 2107.

6. L. LOSASSO ; M. H. DERRON, P. PASCAL, M. JABOYEDOFF, F. SDAO (2016): Definition and mapping of potential rockfall source and propagation areas at a regional scale in Basilicata Region (Southern Italy). Rendiconti Online Della Società Geologica Italiana, vol. 41, pp. 175-178, DOI:10.3301/ROL.2016.12, Roma ISSN: 2035-8008 Roma. [Codice Scopus: 2-s2.0-85006967658; WoS: 0003889181100044]

7. P. SOUPIOS, V. KAVVADIAS, K. HUDDERSMAN, F. SDAO, D. NTARLAGIANNIS (2016): *Integrated Approaches to Soil Contamination Monitoring.* **Editorial** on Special Issue: Applied and Environmental Soil Science, Special Issue (Soupios et al, ed), 2 pages, DOI: 10.1155/2016/5192691, ISSN: 1687-7667, Hindawi Publishing Corporation [Codice Scopus 2-s2.0-84982812640].

8. L. LOSASSO, S. PASCALE , F. SDAO (2016): Rockfall Hazard Assessment in an Area of the "Parco Archeologico Storico-Naturale Delle Chiese Rupestri" of Matera (Basilicata, Southern Italy). in: Computational Science and Its Applications -- ICCSA 2016, Lecture Notes in Computer Science, vol. n. 9789, pagg. 496 – 511, DOI: 10.1007/978-3-319-42089-9_35, ISBN: 978-3-319-42088-2. [Codice Scopus: 2-s2.0-84978224512; WoS: 000381935500035].

9. P. SOUPIOS, V. KAVVADIAS, K. HUDDERSMAN, F. SDAO, D. NTARLAGIANNIS (a cura di) (2016): *Integrated Approaches to Soil Contamination Monitoring.* Special Issue on Applied and Environmental Soil Science, Special Issue, DOI: 10.1155/2016/5192691, ISSN: 1687-7667, Hindawi Publishing Corporation [Codice Scopus 2-s2.0-84982812640].

10. R. PELLICANI, G. SPILOTRO, R. ERMINI & F. SDAO (2016). The large Montescaglioso landslide of December 2013 after prolonged and severe seasonal climate conditions. Landslides and Engineered Slopes. Experience, Theory and Practice – Aversa et al. (eds)", Proceedings of 12th International Symposium on Landslides, vol. 3, pp. 1591-1597. CRC Press, Balkema ed., © 2016 Associazione Geotecnica Italiana, Rome, Italy, ISBN 978-1-138-02988-0 Naples, June 2016 [Codice Scopus: 2-s2.0-84984833426].

11. R. MUZZILLO, S. PASCALE, F. SDAO (2015). Hydrogeology and Vulnerability to Pollution of Carbonate Aquifers in the High Valley of the Basento River (Lucanian Apennines, Southern Italy). Journal of Environmental Accounting and Management, vol. 3(2), pp. 180-196. DOI: 10.5890/JEAM.2015.06.007, ISSN: 2325-6192, L&H Scientific Publishing [Codice Scopus: 2-s2.0-85009397504].

12. M. CONFORTI, S. PASCALE, F. SDAO (2015). Mass movements inventory map of the Rubbio stream catchment (Basilicata - South Italy). Journal of Maps, vol. 11 (3), pp. 454 – 463 (1 Carta Geomorfologica), DOI: 10.1080/17445647.2014.924038, ISSN: 1744-5647,Taylor & Francis, ed. [Codice Scopus: 2-s2.0-84923084125; WoS: 000349988600008].

13. R. ALBANO, A. SOLE, F. SDAO, L. GIOSA, A. CANTISANI, S. PASCALE (2014). A systemic approach to evaluate the vulnerability in urban areas affected by a flood event. Journal of Water Resource and Protection (JWARP), Vol. 6 (2014), pp. 351 - 362, DOI: doi.org/10.4236/jwarp.2014.64037, ISSN: 1945-3108, Scientific Research Publishing.

14. S. F. Dal SASSO, A. SOLE, S. PASCALE, F. SDAO, A. BATEMAN PINZÒN, V. MEDINA. (2014). Assessment methodology for the prediction of landslide dam hazard. Natural Hazards Earth System Science Journal. Vol. 14 (3/2014), pp. 557–567, DOI:10.5194/nhess-14-557-2014. ISSN: 1561-8633, Journal of European Geosciences Union, Copernicus Pubblications ed. Germany [Codice Scopus: 2-s2.0-84896336563; WoS: 000334093600006].

15. M. CONFORTI, S. PASCALE, G. ROBUSTELLI, F. SDAO (2014). Evaluation of prediction capability of the artificial neural networks for mapping landslide susceptibility in the Turbolo River catchment (northern Calabria, Italy). Catena Journal, vol. 113 (2/2014), pp. 236–250, DOI: 10.1016/j.catena.2013.08.006, ISSN: 0341-8162, Elsevier B.V. ed. Amsterdam, Netherlands, [Codice Scopus: 2-s2.0-84887624992; WoS: 000328237500022].

16. CANTISANI A., CAFARELLI R., GIOSA L., MILETI C., SOLE A., SDAO F., ALBANO R (2014). *An Easy Hydraulic Monitoring System To Support The Road Management*. In: (a cura di): Tabyaoui Et Al. (Eds.), Infrastructure des Données Spatiales et Application SIG. pp. 218-223, Presses Academiques Francophones. © 2014, Omniscriptum Gmbh & Co, ISBN: 9783838148373.

17. S. PASCALE, J. BELLANOVA , L. LOSASSO, A. PERRONE, A. GIOCOLI, S. PISCITELLI, B. MURGANTE, & F. SDAO (2014). Geomorphological Fragility and Mass Movements of the Archaeological Area of "Torre di Satriano" (Basilicata, Southern Italy). In: (a cura di): Murgante et al., Proc. of 14th International Conference on Computational Science and Its Applications – ICCSA 2014. In Lecture Notes In Computer Science, Part IV, LNCS vol. 8582, pp. 495–510, DOI: 10.1007/978-3-319-09147-1-36, ISSN 0302-9743, ISBN;: 978331909146_4. Springer International Publishing, [Codice Scopus: 2-s2.0-84904895635; WoS: 000349533900036].

18. F. SOGLIANI, F. SDAO (2014). New methods and tools for a geo-archaeological risk-map. A case study of rupestrian heritage in the Unesco site of Matera. Proceedings of the 4th EARSeL Workshop on Cultural and Natural Heritage, Earth observation: a window on the past, in 33rd EARSeL Symp (La Saponara et., ed) pp. 215 – 234, Matera, 6-7 giugno 2013 ISBN: 978-88-896932-5-4.

19. D. ROUBIS, C. COLACINO, S. FASCETTI, S. PASCALE, V. PASTORE, F. SDAO, G. DI VENUTO, A. FLORENZANO, A. M. MERCURI, A. MIOLA, N. PANARELLA (2013) - The archaelogy of ancient pastoral

sites in the territory of Montescaglioso (4th - 1st century BC). An interdisciplinary approach from the Bradano valley (Basilicata - southern Italy). SIRIS - Studi e ricerche della Scuola di Specializzazione in Archeologia di Matera, vol. 13 (2013), pp. 117 – 136, ISSN: 1824-8659, EDIPUGLIA ed.

20. M. CONFORTI, S. PASCALE, M. PEPE, F. SDAO, A. SOLE (2013). Denudation processes and landforms map of the Camastra River catchment (Basilicata - South Italy). Journal of Maps, vol. 9 (3), pp. 444 - 455 (1 Carta Geomorfologica), DOI: 10.1080/17445647.2013.804797, ISSN: 1744-5647, Taylor & Francis, ed. [Codice Scopus: 2-s2.0-84880931924; WoS: 000328128700013].

21. S. PARISI, S. PASCALE, F. SDAO, P. SOUPIOS (2013). Assessment and mapping of the intrinsic vulnerability to pollution: an example from Keritis River Basin (Northwestern Crete, Greece). Environmental Earth Sciences Journal, vol. 70 (11/2013), Issue 6, pp. 2659 – 2670, DOI: 10.1007/s12665-013-2321-3, ISSN: 1866-6280, Springer (Berlin; Heidelberg) ed. [Codice Scopus: 2-s2.0-84886790271; WoS: 000326347900020].

22. L. GIUZIO, A. BATEMAN PINZON, V. MEDINA, A. SOLE, F. SDAO (2013). Experimental studies on propagation and entrainment processes of debris flows. Rendiconti Online Della Società Geologica Italiana, vol. 24, pp. 158-160, ISSN: 2035-8008 Roma. [Codice Scopus: 2-s2.0-84882763669].

23. F. SDAO, D. S. LIOI, S. PASCALE, D. CANIANI, I. M. MANCINI (2013). Landslide susceptibility assessment by using a neuro-fuzzy model: a case study in the Rupestrian heritage rich area of Matera. Natural Hazards and Earth System Sciences Journal, vol. 13 (2/2013), pp. 395 - 407, ISSN: 1561-8633, DOI: 10.5194/nhess-13-395-2013, Journal of European Geosciences Union, Copernicus Pubblications, Germany [Codice Scopus: 2-s2.0-84874025822; WoS: 000317006600016].

24. S. PASCALE, S. PARISI, A.A MANCINI, M. SCHIATTARELLA, M. CONFORTI, A. SOLE, B. MURGANTE, F. SDAO (2013). Landslide Susceptibility Mapping Using Artificial Neural Network in the Urban Area of Senise and San Costantino Albanese (Basilicata, Southern Italy). In: (a cura di): Murgante et al., Proc. of 13th International Conference on Computational Science and Its Applications – ICCSA 2013. In: Lecture Notes In Computer Science, vol. 7974, pp. 473-488, ISSN: 0302-9743, DOI: 10.1007/978-3-642-39649-6_34. Springer-Verlag [codice Scopus: 2-s2.0-84880716688; WoS: 000335140700034].

25. P. MILILLO, A. PIYUSH SHANKER, S. PASCALE, C. SERIO, F. SDAO (2013). Persistent scatterer interferometry based on COSMO- SkyMed imagery. Proceedings of the 33th EARSeL Symposium Towards Horizon 2020: Earth Observation and Social Perspectives. Pp. 187 – 194, Matera Giugno 2013 , ISBN: 9788889693346.

26. S. PASCALE, V. PASTORE, F. SDAO, A. SOLE (2013). Landslide Susceptibility in Archaeological and Natural Historic Park of Rupestrian Churches. In: Landslide Science and Practice, Second World Landslide Forum. vol. 6, Risk Assessment, Management and Mitigation, pp. 715-722, Berlin Heidelberg: Germany: Springer-Verlag GmbH, ISBN: 9783642313189, Roma, Settembre 2011, DOI: 10.1007/978-3-642-31319-6_91 [Codice Scopus: 2-s2.0-84898074945].

27. R. ALBANO, S. PASCALE, F. SDAO, A. SOLE (2013). A GIS Model for Systemic Vulnerability Assessment in Urbanized Areas Supporting the Landslide Risk Management. In: Landslide Science and Practice, Second World Landslide Forum. vol. 6, Risk Assessment, Management and Mitigation, pp. 723-731, Berlino Heidelberg, Germany: Springer Verlag, ISBN: 9783642313189, Roma, Settembre 2011, doi: 10.1007/978-3-642-31319-6_92 [Codice Scopus: 2-s2.0-84898060555]

CORSI/COURSES:

GEOLOGIA APPLICATA, CDS ARCHITETTURA

ORARIO E SEDE DI RICEVIMENTO: Martedì 15,00 – 17,00; Giovedì dalle 15,00 alle 17,00
Architettura, Via Rocco Lazazzera, Matera

Altri orari previo appuntamento / Other times by appointment

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