



Vito Schifano, Ph.D., P.Eng., P.E.

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EXPERT SUMMARY

Dr. Vito Schifano is the National Practice Lead of the Geotechnical and Mining Group at 30 Forensic Engineering. Dr. Schifano has 25 years of combined experience in research, teaching, consulting, design and construction management, and forensic geotechnical engineering on national and international projects in the manufacturing, oil & gas, mining, energy and infrastructure sectors. He is a licensed engineer in Canada, the USA, the UK and Italy, and actively participates in activities of professional societies, committees (DFI-Soil Mixing and ASCE Geoenvironmental) and networks (Sednet, S/S Technology Network).

SPECIALIZED PROFESSIONAL COMPETENCIES

- Geotechnical
- Mining
- Geo-Environmental and Redevelopment of Contaminated Sites
- Heavy Civil Infrastructure
- Waterfront Engineering
- Soil Mechanics and Soil Structures
- Technical & Project Finance Investigations
- Risk Management
- Multi-site and Multi-scope Project Management

ACADEMIC BACKGROUND

- Ph.D. Geotechnical Engineering, University of Illinois at Urbana - Champaign, Urbana, IL, USA, 2001
- M.Sc. Soil Mechanics and Environmental Geotechnics, Imperial College - University of London, London, UK, 1993
- Laurea Civil Engineering, University of Palermo, Palermo, Italy, 1991



EMPLOYMENT BACKGROUND

30 Forensic Engineering

Practice Lead, Geotechnical and Mining
2018 – Present, Toronto, ON

- Geotechnical engineer and project manager for multidisciplinary forensic investigations and failure analyses primarily related to insurance and/or legal claims, spanning across a wide range of residential, commercial and industrial business sectors within the Americas.
- Involved in geotechnical origin and cause investigations, technical assessment and cost estimation related to repair/remediation strategies and construction risk assessments.
- Geotechnical assessments and analyses experience includes:
 - Analysis of failures in shallow and deep foundations;
 - Excavation shoring and dewatering;
 - Earth retaining systems;
 - Assessment of slopes and erosion;
 - Dams and embankments;
 - Tunneling and micro-tunneling;
 - Waste disposal facilities;
 - Contaminated land assessment and remediation;
 - Tailings and sediments storage facilities closure;
 - Blasting and vibration assessments;
 - Sinkholes;
 - Soil and foundation response to frost;
 - Shrinkage/swelling; and,
 - Chemical spills.
- Engage in technical publications, applied research projects on innovative technologies for integrated remediation and restoration of contaminated sites and oil sand tailings, , and client and business development initiatives.

Independent Consultant/Owner

Geotechnical Engineer
2016 – Present, Parma, Italy

- Consult on forensic geotechnical engineering and litigation support on international projects.
- Provide consulting on international projects for oil & gas, mining and manufacturing clients.
- Support Ladurner Bonifiche Srl (Bolzano, Italy) and Zoomlion Ltd. (Changsha, China) in business development, marketing, design and implementation efforts for soil mixing technology application in large environmental remediation and regeneration projects in Italy, Europe and China.



- Lead proposals, design, and manage design and build projects of integrated remediation/closure of waste impoundments and application of innovative technologies to site remediation and ground improvement.

Golder Associates

Technical Expert

2012 – 2013, Montreal, QC

2013 – 2015, Boston, MA

- Contributed in various roles (Technical Expert, Project Director, Lead Designer, and Technical Manager) to projects in the area of remediation and redevelopment of contaminated sites, design and closure of mining and industrial waste impoundments, sediment remediation, transportation geotechnics and ground stabilization in the mining, manufacturing, power, infrastructure and oil & gas sectors from planning stage, through detailed design and construction, and into operations and closure.
- Leader of strategic multi-sector CD national and global initiatives based on technical services on soil mixing technologies for integrated remediation, closure and restoration of marginal and degraded land including acid tar lagoons, coal ash ponds, tailings impoundments, and sediments confined disposal facilities.

ARCADIS

Associate Vice President / Principal Geotechnical Engineer

2008 – 2012, Boston, MA, USA

- Contributed in various roles (Technical Expert, Lead Designer, and Technical Manager) to design and construct implementation of remediation/closure of refinery ponds, acid tar sludge lagoons, tar ponds, industrial sludge impoundments, and MGP sites and geotechnical design to support brownfields site redevelopment.
- Leader of technical knowledge and innovation disciplines on “Ground Treatment Technologies” and “Soft Soil, Sediment, Tailings Applications”.
- Contributed to the development and marketing of innovative approaches for soil treatment and remediation, proposals and business development efforts such as the development of a service for restoration and reclamation of marginal sites (“Makeland™”), internal and external technical presentation and training seminars, professional networks activities (DFI-Soil Mixing Committee, ASCE Geoenvironmental Committee, Sednet Europe) and to a number of papers for technical journals or professional conferences.

Principal Engineer

2003 – 2008, Newmarket, UK

- Design and project delivery of remediation for oil & gas, chemical and manufacturing clients and brownfield redevelopment projects.
- Member of “Innovative Remedial Technologies Group”. Collaborated in applied research projects with academic institutions (Imperial College, Cambridge University, and U of Reading) on innovative solutions for soil remediation using degradative soil mixing and solidification/stabilization technologies. Contributed to the establishment of Soil Treatability Laboratory to support national and European projects.



URS Corporation Inc.

Senior Geotechnical Engineer
2001 – 2002, Seattle, WA

- Engineering analysis and design of tailing dams, offshore sediment caps, retaining structures, slopes, waste impoundments, shallow and deep foundations.

European Marine Contractor

Research Engineer
1992 – London, UK

- Research on optimization of the jet sled technology to lay submarine oil pipelines. Optimization of parameters in the use of high-pressure jets to excavate narrow trenches in the sea bed for the direct lay of oil pipelines in the North Sea. Supervised a MSc research at King's College, London, on the development of a small-scale laboratory model to investigate the jetting process.

University of Illinois

Lecturer

- Lecturer for Laboratory Techniques in Soil Mechanics - CE 383 (1998 - 2000)
- Teaching Assistant for Soil Mechanics and Foundation Engineering - CE 280 (1996 - 1998)
- Lecturer for Soil Mechanics and Foundation Engineering - CE 280 (1996)

Researcher

- Ph.D. research on "Electrical Treatment of Clays"
- USACE – St Paul District research contract on "Lime Treatment of Brenna Clay"

PROFESSIONAL SOCIETIES, ASSOCIATIONS AND HONOURS

- Professional Engineers of Ontario (PEO), Member & Licensed Professional
- Association of Professional Engineers and Geoscientists of Alberta (APEGA)
- Professional Engineer, Italy, (Ordine di Palermo 1992 – 2017, Parma 2017 – Present)
- Professional Engineer (PE), New Hampshire, USA, 2009
- Chartered Engineer and Member of the Institution of Civil Engineers, UK, 2006
- Canadian Geotechnical Society, 2012 – present
- American Society of Civil Engineers – Geo-Institute (member of Geo-Environmental Committee)
- Deep Foundation Institute (member of Soil Mixing Committee)
- Member STARNET (Stabilization/Solidification Treatment and Remediation Network)
- Member SedNet (European Network on Sediment Management)

AWARDS AND ACHIEVEMENTS

- Ralph B. Peck Scholar, 1997



- Fulbright Scholar – University of Illinois, 1993
- University of Palermo Scholarship for Studies Abroad – University of Illinois, 1994
- Phi Kappa Phi Honor Society, University of Illinois
- SERC (Science and Engineering Council) UK Scholarship – Imperial College, 1992

COURSES AND TRAINING

- Health Safety & Environment, Golder 2012 – 2015
- Occupational Safety and Health Association (OSHA) Training, 2008 – 2014
- Loss Prevention System (LPS) Health and Safety, ARCADIS, 2006

PUBLICATIONS AND RELATED PRESENTATIONS

Conference Proceedings

- Schifano Vito and Gerressen Franz-Werner, 2021. Environmental Applications of Deep Soil Mixing. DFI Deep Mixing Conference June 2021 (Online Event).
- Schifano Vito 2021. In-Situ Soil Reagent Mixing for Integrated Remediation and Restoration of Contaminated Land. SmartRemediation Conference February 4th to 25th, 2021 (Online Event).
- Schifano Vito, 2019. *Geotechnical Challenges in Management of Tailings Storage Facilities*. Mining Insurance and Risk Association (MIRA) Conference, November 4-5, 2019, Toronto.
- Schifano Vito and San Nicolò Lorenz, 2019. Integrated Remediation - Redevelopment of Contaminated Sites: the ISCOSS Soil Mixing Technology. Workshop “Best Practices of ISCO with Activated Persulfate”. Sustainable Use and Management of Soil, Sediment and Water Resources (AquaConSoil) 15th International Conference, Antwerp, 22.05.2019.
- Schifano Vito and San Nicolò Lorenz, 2019. *Integrated Remediation and Regeneration of Contaminated Sites: the ISCOSS Technology*. SiCon 2019 Workshop on: Contaminated Sites. Remediation Experiences and Cases. University of Brescia, Italy. February 2019.
- Schifano Vito and Lilley Frank, 2018. *Solidification / Stabilization Remediation of Acid Organic Waste for Impoundment Closure*. Submitted to the 8th International Congress on Environmental Geotechnics (ICEG2018). Hangzhou, China, Oct 18 – 21, 2018.
- Schifano Vito and Luo Philip, 2017. Innovative Soil Mixing Technologies for the remediation and restoration of contaminated sites. Soiltec China, Shanghai, October 20, 2017.
- Schifano Vito, 2017. Innovative Soil Mixing Technologies: Cost effective solutions for the remediation and restoration of Complex Contaminated Sites and Mega-Sites. 15th China International Environmental Protection Exhibition & Conference, Beijing, June 14, 2017.
- Schifano Vito, 2017. *Innovative Soil Mixing Technologies: Cost-Effective Solutions for the Remediation of Complex Sites and Mega-Sites*. The 5th International Forum & Exhibition on Contaminated Site Remediation, May 4-6, 2017, Shanghai.
- Schifano, Vito. 2015. *Binder Stabilization with Beneficial Use of CCR in Closure- Remediation / Corrective Actions of Coal Ash Impoundments*. World of Coal Ash Conference, May 5-7, 2015, Nashville, USA.

**-30- Vito Schifano, Ph.D., P.Eng., P.E.**

- Schifano, Vito. 2014. *Binder Stabilization Technologies for Closure and Corrective Actions at CCR Impoundments*. Wastewater-Ash/PCUG Conference, Sept. Birmingham, AL USA.
- Schifano, Vito. 2013. *Soil Mixing Innovation for Land Restoration*. ASCE, geo-Institute. Geostrata Magazine.
- Chwalibog, Adam, Margaret Carrillo-Sheridan and Vito Schifano. 2012. *In-situ Solidification / Stabilization (ISS) Treatability Testing and Implementation at Former Manufactured Gas Plant Sites*. MGP 12. Chicago, USA.
- Rogoff, Eric, Thomas Fisher, Vito Schifano and William Thompson. 2012. High Resolution TarGOST/ CPT Characterization of DNAPL and Evaluation of Remediation Trenches using MVS. MGP 12. Chicago, USA.
- Schifano, Vito et al. 2011. *Beneficial Reuse of Dredged Sediments, Soils and Coal Combustion Products for Reclamation of a Refinery Surface Impoundment*. 7th International SedNet Conference: Sediments and biodiversity: bridging the gap between science and policy, April. Venice, Italy.
- Schifano, Vito et al. 2010. *Stabilization of Oily Sediments for Cap Closure of a Refinery Oxidation Pond*. The International Solidification/Stabilization Technology Forum, June. Sydney, Canada.
- Schifano, Vito and Fabian, Kristof. 2010. *A Laboratory Study of Binder Stabilization of Oily Refinery and Dredged Marine Sediments*. GeoFlorida 2010: Advances in Analysis, Modelling, and Design, March. West Palm Beach, USA.
- Fabian, Kristof and Schifano, Vito. 2010. *Design and Pilot Test of Binder Stabilization of Oily Refinery and Dredged Marine Sediments*. GeoFlorida 2010: Advances in Analysis, Modelling, and Design, March. West Palm Beach, USA.
- Schifano, Vito and Thurston, Neil. 2007. *Remediation of a Clay Contaminated with Petroleum Hydrocarbons using Soil Reagent Mixing*. 22nd Annual International Conference on Soils, Sediments and Water, October. Amherst, USA.
- Schifano, Vito et al. 2005. *Remediation of Soils Contaminated with Petroleum Hydrocarbons using Quicklime Mixing*. International Conference on Stabilization/Solidification, Treatment and Remediation, April. Cambridge, UK.
- Fabian, Kristof, Schifano, Vito et al. 2002. *The Design of the Upstream Expansion of a Double-Lined Tailings Impoundment*. ASDSO Tailings Dams 2002, May. Las Vegas, USA.

Journal Articles

- Collins, Christopher, Lothian, Daniel and Schifano, Vito. Remediation of Soils Contaminated by Petrol and Diesel Using Lime. *Land Contamination and Reclamation*, 17 (2009), 237-244.
- Schifano, Vito et al. Evaluation of Quicklime Mixing for the Remediation of Petroleum Contaminated Soils. *Journal of Hazardous Materials*, 141 (2007), 395 - 409.

Other

- Soil Mixing Innovation for Land restoration. Geo-Strata Magazine July 2013.
- G. Mesri, M. Al-Zoubi, V. Schifano, M.M. Shahien (1999). "Lime Treatment of Brenna Clay". Report DACW 37 – 99. United States Army Corps of Engineers, St. Paul District MN.
- V. Schifano (2001) "Electrical Treatment of Clays". PhD Dissertation. Department of Civil and Environmental Engineering, University of Illinois at Urbana-Champaign.



-30- Vito Schifano, Ph.D., P.Eng., P.E.

- V. Schifano (1993) "Electrokinetic Remediation of Clays". MSc. Thesis, Soil Mechanics and Environmental Geotechnics, Imperial College, University of London.
- V. Schifano (1991) "Consolidation process in double porosity media". University of Palermo - Department of Structural and Geotechnical Engineering.
- N.Hadlow (2004). A Study on the Remediation of Petroleum Hydrocarbon Contaminants in Soils using Quicklime. M.Sc. Program, Imperial College of Science Technology and Medicine. Dept. of Earth Sciences. External advisor, principal advisor: Prof W. Dudeney.
- D Lothian (2006). Remediation of Soil Contaminated with Petroleum Hydrocarbons using Hydrated Lime and Quicklime. M.Sc. Program, Imperial College of Science Technology and Medicine. Dept. of Earth Sciences. External advisor, principal advisor: Prof C. Collins.