GIOVANNI LI DESTRI NICOSIA

Senior Specialist

Geotechnical and Earthquake Engineering

DATE OF BIRTH

14 November 1972

NATIONALITY

Italian

EDUCATION

PhD. Universitá di Catania, Italy. 07/2006-10/2010
Geotechnical Engineering

MSc. Rose School of Pavia, Italy. 05/2005-07/2006
Earthquake Engineering

MSc. Munich Technical University, Germany. 10/2003-05/2005
Computational Mechanics

MSc. Glasgow University, United Kingdom. 10/1999-10/2000
Geotechnical Engineering

Laurea in Ingegneria Civile. Universitá di Catania, Italy. 09/1992-10/1999
Civil and Geotechnical Engineering, (Magna cum Laude)

MEMBERSHIPS

Professional body of engineers of Catania

RECENT TRAINING

COWI project management course, 2019.

Essential MBA, London School of Economics, 2019.

Offshore Wind Farm Technology: design, installation and operation, TUDelft, 2019.

Seismic analysis with Plaxis 2D, 2017.

YEARS OF EXPERIENCE

15

KEY QUALIFICATIONS

Geotechnical engineering, Earthquake engineering, Computational Mechanics, Geotechnical investigations and testing, Foundation design

LANGUAGE SKILLS	SPEAKING	READING	WRITING
ITALIAN	Mother tongue	Mother tongue	Mother tongue
ENGLISH	Excellent	Excellent	Excellent
SPANISH	Excellent	Excellent	Very good
FRENCH	Good	Very good	Fair
DANISH	Fair	Fair	Fair

OTHER SKILLS

Programming languages (C, Fortran, C++, Python), Visual Basic; Software: Plaxis 2D and 3D, FLAC2D, SASSI2010, DynaN, LPile, Opensees, OpenseesPL SlopeW, Wallap, 1D Seismic Site Response analysis software (Deepsoil, Shake, DMod), Load penetration analysis (GRLweap), PISA springs, Matlab, Mathcad; Project management

EMPLOYMENT RECORD

10/2012-PRESENT
COWI A/S, Denmark
Senior Geotechnical Engineer/Senior Specialist. Geotechnical and Earthquake Engineering

12/2010-08/2012
D´Appolonia S.p.A., Italy
Geotechnical Project Responsible Engineer. Geotechnical Earthquake Engineering for Offshore projects

06/2008-11/2010
Mott MacDonald, United Kingdom
Geotechnical Engineer. Transportation projects

05/2007-06/2008
D´Appolonia S.p.A., Italy
Senior Engineer. On shore and offshore projects

05/2006-05/2007
University of Pavia, Italy
Researcher. Evaluation of EC8 provisions for retaining structures design

02/2002-08/2003
CDH AG, Germany
Crash Engineer. Crash analyses

06/2001-10/2001
University of Patras, Greece
Researcher. Interpretation of shaking table tests results

11/2000-06/2001
Grupo ACS, Spain
Leonardo da Vinci, Stagier. Formwork and steel estimates, stability of retaining structures

10/1998-03/1999
CEA(Commissariat a l´ Energie Atomique), France
Researcher. Shaking table tests of shear walls with partial uplift, FEM simulation for tests preparation

WORK EXPERIENCE

Denmark, France, Germany, Greece, Italy, Spain, United Kingdom

SELECTED PROJECTS

2019-ONGOING
DNV-GL
JIP-REDUCING CYCLONE AND EARTHQUAKE CHALLENGES. Member of steering committee. Joint industry Project to produce DNV-GL design guidelines for design of OWF in areas with high seismicity and cyclones with particular focus on Taiwan, Japan and USA
Responsible to participate to meetings and contribute to writing and reviewing design guidelines for geotechnical earthquake part of the guidelines, responsible for task related to soil damping and monopiles design examples

TAIWAN 2020-ONGOING TAIWANESE PROJECT III	Taiwanese project III. Geotechnical Earthquake Lead. Concept design for 108 jacket piled foundations offshore Taiwan Geotechnical Earthquake lead: overall strategy, specification of cyclic test programs for seismic loading, liquefaction assessment, seismic response in effective stress, effective input motions and kinematic interaction using automated python-Plaxis routines with PM4 model and Deepsoil for total stress analysis
TAIWAN 2019-2020 TAIWANESE PROJECT I	Taiwanese project I. Geotechnical Earthquake Lead. Detailed design for 47 jacket piled foundations offshore 3.8 to 9.5 Km off the west coast of mainland Taiwan in water depths ranging from 35 to 55 m, capacity of 376 MW Responsible for interface between contractor and seismic consultant and liquefaction assessment; development of a computational procedure for evaluation of modal soil damping
TAIWAN 2015-2017 FOWI	FORMOSA I PHASE II OWF. Geotechnical earthquake design lead. Detailed design for 21 monopiles foundations offshore, 3 to 6 Km off the west coast of main land Taiwan in water depth between 15 m and 31 m and capacity 130 MW Responsible for incorporating input provided by client in the design
TAIWAN 2014-2015 TAIWANESE PROJECT II	Taiwanese project II OWF PILOT. Geotechnical earthquake design lead. Detailed design of 21 jacket piled foundation for 5.2 MW turbines offshore western Taiwan Responsible for all geotechnical earthquake engineering tasks, development of integrated computational approach for liquefaction assessment
SWEDEN 2016-2017 ESS	EUROPEAN SPALLATION SOURCE (ESS) PARTICLE ACCELERATOR. Geotechnical design lead and manager. Detailed design of the target building, experimental halls and adjacent buildings of a new generation neutron particle accelerator in Lund Sweden. Main challenges are the seismic design under a design earthquake of 1 million years return period and very strict requirements relative to admissible settlements for neutron beams. Geotechnical engineering Lead: responsible for all geotechnical related aspects of the design. Horizontal and vertical site response analyses, soil impedance evaluation for piled and surface foundations; Seismic design of retaining structures and galleries. Eight interconnected large building foundations including approximately 3000 piles and galleries and four adjacent building on piled and surface foundations. Development of an innovative computational procedure for the assessment of impedance of pile groups with non homogenous diameters and length. Innovative use of eEPS for lateral seismic isolation of a nuclear related facility.
TURKEY 2016-2018 YAPIMERKEZI	CANAKKALE BRIDGE. Geotechnical earthquake lead. Detailed design for a major suspension bridge with a world record main span through the Canakkale strain in Turkey. Lead the geotechnical earthquake engineering strategy for the bridge foundations seismic assessment.

CHINA 2016 THE ADVANCED WORK OFFICE FOR THE SHENZEN-ZHONGSHAN LINK PROJECT	SHENZHEN ZHONGSHAN LINK DESIGN COMPETITION. Senior Engineer/Specialist. 24 km long fixed link including two suspension bridges, one immersed tunnels and 2 artificial islands and connecting Shenzheng and Zhongshan. Geotechnical and seismic concept design for steel tubular retaining structures for the artificial islands and of the cofferdams, including DCM ground treatment and finite element models.
TURKEY 2015-2016 COWI FONDEN	SELECTION OF GROUND MOTION PREDICTION EQUATIONS FOR IZMIT BRIDGE PROBABILISTIC SEISMIC HAZARD ASSESSMENT. Specialist (Geotechnical Earthquake). COWI FOND financed, re-evaluation of probabilistic seismic hazard assessment for Izmit Bridge using regional ground motion attenuation laws. Draft of proposal and re-evaluation of seismic hazard assessment. The new regional ground motion attenuation laws are provided by Prof Guelerce from Ankara University.
TAIWAN 2014-2016 SWANCOR	FORMOSA OWF PILOT. Specialist (Geotechnical Earthquake). Offshore Wind Farm. Geotechnical earthquake engineering part of the Front End Engineering, Phase I and Detailed design for the Formosa offshore wind farm located in seismic area and with presence of liquefiable soils. Estimation of earthquake ground motion at the site, selection and processing of earthquake time histories, liquefaction assessment, site response analysis, non-linear effective stress time history analysis of the selected pilot turbine and estimation of residual displacements.
DENMARK 2014-2015 BANEDANMARK	NEW RAILWAY COPENHAGEN-RINGSTED. Specialist. Danish high speed railway approximately 60 km long connecting Copenhagen and Ringsted. For part TP50 development of a computational tool (Mathcad) used to design bridges earth retaining structures and geotechnical design of SBRA09 bridge substructures according to EC7. For part TP21 and TP4 assessments of frost heave hazard using FEM tools and simplified analyses. Design of remediation measures for different locations for both tunnels and trough sections. Geotechnical design of TP50 SBRA09 underpass retaining structures. Determination of structural forces at several locations of the retaining structures (abutment and wing walls) to be used for structural design. Assistance to colleagues for the geotechnical design of other retaining structures in TP50.
ITALY 2012 ENI	GEOTECHNICAL SURVEY FOR 2 OFFSHORE PLATFORMS AND ONE RIG MOVE IN THE ADRIATIC SEA. Project manager. Geotechnical investigation and geotechnical design for two offshore platforms Planning and managing of offshore geotechnical survey and geotechnical analysis for pile design of fixed piles offshore platforms and jackup rig move including liquefaction hazard assessment and soil resistance to driving analysis.
EGYPT (GULF OF SUEZ) 2012	NWO PLATFORM GULF OF SUEZ. Specialist (Geotechnical earthquake). Nonlinear site response analysis and definition of seismic loads for offshore platform seismic design.

EGYPT 2011 BRITISH PETROL	WND FIELD OFFSHORE NILE DELTA. Specialist (Geotechnical earthquake). Nonlinear site response analysis and definition of seismic loads for underwater gas field offshore Nile Delta.
LYBIA 2011	BOURI FIELD OFFSHORE. Geotechnical Engineering. Driven and drilled piles capacity. Nonlinear site response analysis, liquefaction assessment and definition of seismic loads for offshore platforms offshore Lybia.
MYANMAR 2011	ZATWIKA PLATFORM. Specialist (Geotechnical earthquake). Nonlinear site response analysis, liquefaction assessment and definition of seismic loads for offshore platforms offshore Myanmar.
MYANMAR 2011 TOTAL	YADANA FIELD. Specialist (Geotechnical earthquake). Effective stress nonlinear site response analysis, liquefaction assessment and definition of seismic loads for offshore platforms offshore Myanmar.
ISRAEL 2011	NOBLE TAMAR FIELD. Specialist (Geotechnical earthquake). 3D FEM dynamic soil structure interaction analysis for deepwater suction bucket supporting a manifold using advanced cyclic soil models in Opensees.
AZERBAIJAN (CASPIAN SEA) 2011 BRITISH PETROL	SHAH DENIZ FIELD. Specialist (Geotechnical earthquake). Liquefaction analysis assessment based on PCPT test results and settlement prediction for two offshore platforms and related facilities.
GREECE, ITALY 2010	IGI POSEIDON. Specialist (Geotechnical earthquake). Pipeline connecting Apulian Italy to Epirus Greece. Liquefaction and lateral spreading assessment.
UNITED KINGDOM 2010	BLACKFRIARS BRIDGE. Geotechnical Engineer. 3D modelling of piled foundations of south abutment, specifications and supervision of piles construction and pile load tests Foundation design for bridges.
MONACO 2009 SBM OFFSHORE	FPSO ANCHORING SYSTEM. Geotechnical Engineer. Deepwater mooring system for FPSO, (analytical modelling with formulation calibration and numerical integration of equations of motions for deep water mooring systems).
EGYPT 2009 BRITISH PETROL	WEST NILE DELTA GEOHAZARD MITIGATION. Geotechnical engineer. Nonlinear site response analyses for marine sites offshore Nile Delta
GERMANY 2002-2003 AUDI AG	CRASH OCCUPANT SAFETY. FEM Engineer. Carry out FEM calculations for occupant safety assessment for automotive industry.

PUBLICATIONS

Melin, G., Rezvani, S., Li Destri Nicosia G., and Tian-yu Wang. 2019: "An innovative approach in assessing the residual tilt for the design of an offshore wind farm in Taiwan", 16th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering,16ARC, Taipei

Li Destri Nicosia, G. 2018: "Role of eEPS in the seismic performance and design of the European Spallation Source target Building", 16th International Conference in Earthquake Engineering, June 18-21, ECEE16th, Thessaloniki, Greece

Li Destri Nicosia, G., Nicolai, G. and A. Show Jensen A. 2017. 2017: "Foundation dynamic stiffness for group of piles with non homogeneous diameters and lengths", International conference on structural mechanics in reactor technology, August 20-25, SMiRT24th, Busan, Korea

Li Destri Nicosia, G., Gülerce Z. 2016: Selection of ground motion prediction equations for probabilistic seismic hazard assessment of the Izmit bay bridge, 35th General Assembly of the European Seismological Commission, ESC2016.

Li Destri Nicosia, G. 2016: Seismic design of monopile supported offshore wind turbines in presence of extensive liquefaction, 1st International Conference on Natural Hazards and Infrastructures, ICONHIC2016.

Li Destri Nicosia, G. 2014: Engineering approaches to site specific propagation of vertical ground motion for seismic design, 15th European Conference in Earthquake Engineering and Seismology, Istanbul

Li Destri Nicosia, G., C., M., Traverso, E., J., Parker. 2009: Non linear site response for marine deep soil sites, 17th ICSMGE, Proceedings Editors Mamdouh Hamza, Marawan Shahien, Yasser El-Mossallamy

C. Comina, M. Corigliano, S. Foti, C. G. Lai, R. Lancellotta, F. Leuzzi, G. Li Destri Nicosia, R. Paolucci, A. Pettiti, P. N. Psarropoulos and O. Zanoli. 2008: Parametric study of cantilever wall subjected to earthquake loading, MERCEA08, Proceedings Editors Adolfo Santini and Nicola Moraci

Li Destri Nicosia, G., Combescure, D., Politopoulos, I., Sollogoub, P. 1999: Numerical studies of the CAMUSIV structure with partial uplift at the basement, AFPS99, Proceedings Editors Bard Pierre-Yves, Mazars Jacky

HOBBIES

Biking, travelling, cooking