



EFCA
FUTURE LEADER OF THE YEAR
2022

Personal details / Entry Form

Full name: Federico Foria

Nationality: Italy

Birthday: 29/09/1989

Age as of 31/03/2022: 32

Company: ETS S.r.l.

Location: Milan

Member Association: OICE

Contact details

E-mail address: federico.foria@etsingegneria.it

Office phone number: +39 02 2217 99 80

Cell phone number +39 334 3759251

Instructions for completing this form



Note to candidates

Each section and sub-section may be expanded as required. The completed entry form should be no longer than **16 pages in total**. Section A is to be completed by your employer, and Section C by the client.

All entries should be submitted in English. Any annexes in other languages should be accompanied by an English translation or will not be taken into account.

The form should be returned to your national association. They will forward it to the EFCA Secretariat.

You will be informed of the results of the competition at end of April 2022.

Good luck!

For those participating in the FIDIC FL competition

The requirements stipulated in the respective EFCA and FIDIC FL competitions coincide largely for 75%. The following three FIDIC competition requirements are entirely covered in the EFCA application:

- Technical achievements (see Section B in this template) (50%)
What is 30% for EFCA
- Leadership achievements (see Section C in this template) (15%)
What is 40% for EFCA
- Social and community contributions (see Section B in this template) (10%)
What is 30% for EFCA

However, EFCA FLs interested in submitting an application for the FIDIC FL competition should complement their EFCA application with the following two extra requirements.

Applicants should demonstrate:

- Contributions to consulting engineering industry (15%)
- Contribution to consulting engineering associations (10%)

Section A. EMPLOYER'S RECOMMENDATION

Motivation for nominating the candidate: for example: the candidate's personal qualities; their contribution to the specific project; their communication skills with the client/end user; their management potential.

The current opportunity sparked my interest and led me immediately to sponsoring the candidate. He is an extremely motivated professional with civil engineering skills and management and coordination experience that is contributing to the growth of the company in these years. Most of all, I was driven not only by the professional background but, most of all, by the values and the empathy proved during the project and the career in the company.

Currently, the candidate is the Manager of the Geotechnics, Geology and Hydraulics department in the company. He has overcome a lot of challenges and put together valuable teams with a substantial increase in the projects, quality and personnel. He is responsible for a project's portfolio through all the life cycle, from planning and conceptual design, to survey, detailed design, construction and asset management. He is also the Manager of the Research & Development department, leading successful projects such as MIRET (Management and Identification of the Risk for Existing Tunnels), a new methodology for the survey, the inspection, the analysis and the digital management of infrastructures towards digital transformation and sustainable maintenance. MIRET was fundamental for the success of the project and won the Ground Engineering Awards 2020 in the Digital Innovation category.

He works strictly with the Marketing and Business Development Department to expand the company market in Italy and abroad. He is extremely motivated by international travelling and the environment, as noticed by his contribution to the international technical and scientific community in different fields.

He is used to liaising with clients and teams, thanks to different work experiences and the continuous support and coordination to different departments. He is a natural in the field, always looking for new challenges. As proved in the presented project, he is always so eager to increase his knowledge and never scared to push his skills on the line to give his contribution for the sake of science. He is ready to approach any topic with new ideas and with astonishing confidence for his age. He is incredibly keen to establish good interpersonal and working relationships and in strengthening his background with fruitful discussions at every moment.

Name: Gabriele Miceli

Job title: CEO

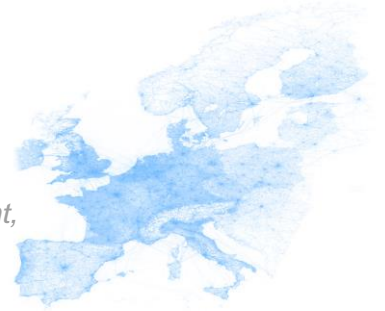
Managerial relationship to candidate: CEO

E.T.S. S.r.l.
L'Amministratore Unico
(Ing. Gabriele Miceli)
Via Appia Nuova n. 59
00183 ROMA
Partita IVA 02245480591

Section B. THE PROJECT

B.1 Project description:

Overview of the project, including description of the product/service, client, project partners, timing, specific challenges etc. Supporting documents (which may include photos, drawings or publications) may be included.



Operating on an infrastructure part of the main France-Italy railway links, the owner RFI brought the need for a fast and reliable assessment of the lining conditions of the tunnels along the Andora-S. Lorenzo railway line to design and plan the maintenance. The project (along 25 km of tunnels) had to comply with:

- 1) the difficulty for inspection and planning on a working line with short disruptions allowed only during the night
- 2) the need for objective data and evaluation to speed up the technical table among the parties (owner, tester, designer, contractor) to solve non-compliances regarding cracks and to have an assessment of the water defects for future maintenance
- 3) no standards for the categorization of defects in mechanized tunnels

ETS has overcome issues 1) and 2) by using ARCHITA and MIRET. MIRET (Management and Identification of the Risk for Existing Tunnels) is an approach that integrates innovative equipment, technical know-how and a digital approach for the management of the priorities along tunnels, and ARCHITA, a multi-dimensional mobile mapping system for the survey and inspection of tunnels.



Figure 1. ARCHITA photographic scanning: field of view (on the left) and light detail during an acquisition along the line (on the right)

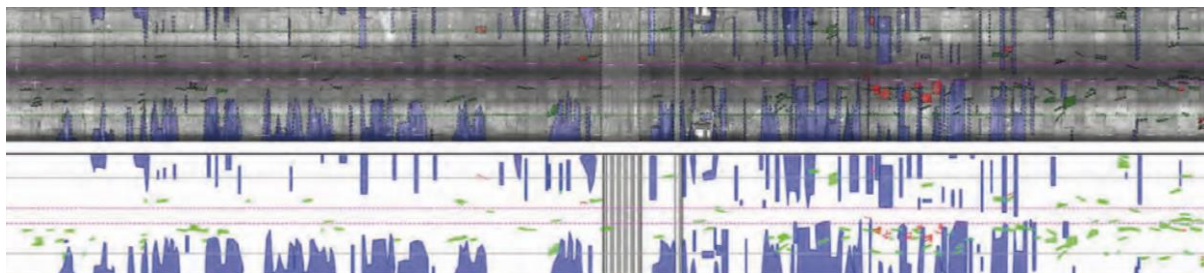


Figure 2. MIRET defects detection output along the line: digitalization of the defects on the HD photo (on the top) and CAD output for the deliverable (on the bottom)

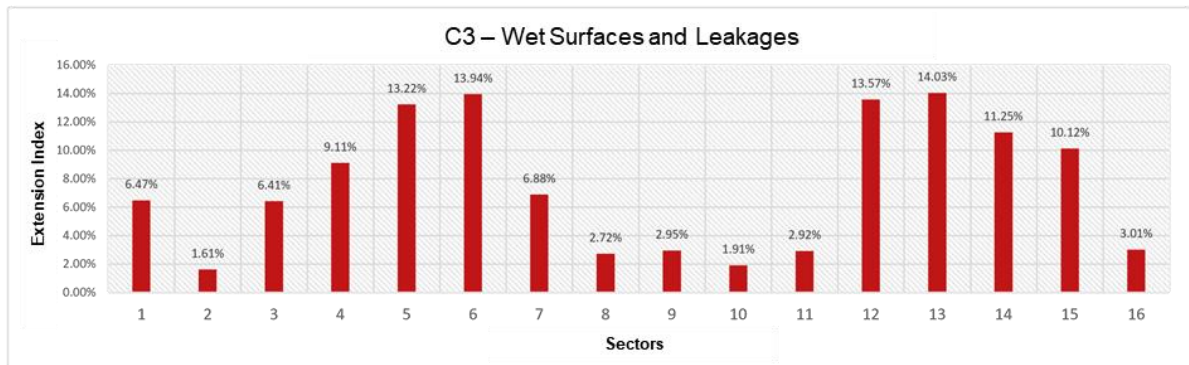
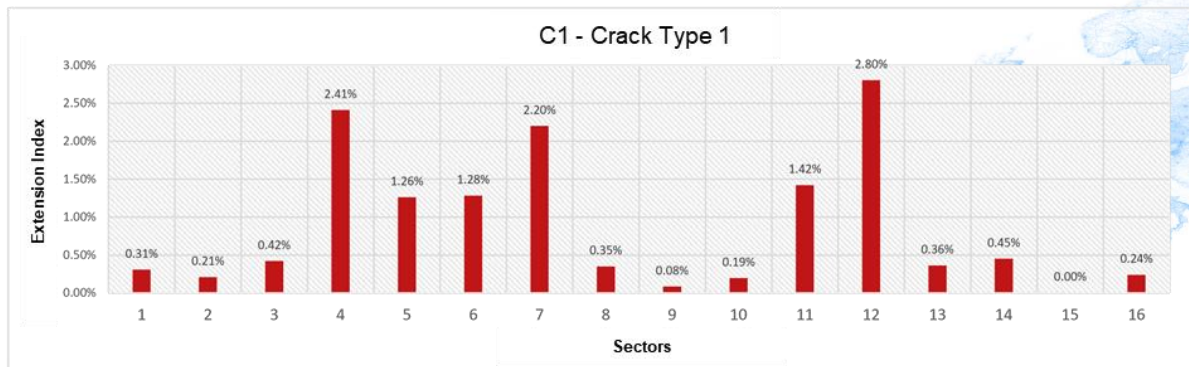


Figure 3. MIRET. Statistical elaboration of the defects for each sector (of 200 m) for one tunnel along the ling: Crack Type I (on the top) and Wet Surfaces and Leakages (on the bottom)

The issue 3 was overcome thanks to the participation of the candidate in the Working Group 2 (WG2) Research of the Italian Tunnelling Association (SIG), where he is an active member since 2017. He joined a publication in 2019 on the Damages of Segmental Lining (2016-2019) and applied the most updated standards to develop a catalogue for the detection of defects from the scanning data.



Water Defect			
C6	Percolation from the joints		
Definition: Infiltration of water through joints (longitudinal, transversal, mortar injection holes, segment connectors). Presence of humidity or water in the concrete as a result of infiltration. The phenomenon occurs in the presence of imperfect, if not absent, waterproofing at the construction joints.			
Unità di measure: m ²			
Intensity assessment	0.25	Surface stains of salt and chloride deposits	0.25 % (Tot Area / Sector Area)
	0.5	Deep stains of salt and chloride deposits	0.5 % (Tot Area / Sector Area)
	0.75	Wet surface	0.75 % (Tot Area / Sector Area)
	1	Dripping surface	1 % (Tot Area / Sector Area)

Figure 4 WG in World Tunnel Congress 2019 (the candidate is circled) and example of defect technical sheet in the MIRET catalogue extrapolated

References on the project and technologies/processes mentioned authored by the candidate:

Foria, F., Avancini, G., Ferraro, R., Miceli, G. & Peticchia, E. 2019. ARCHITA: an innovative multidimensional mobile mapping system for tunnels and infrastructures. MATEC Web of Conferences: 295, p. 01005.

Foria, F., Giordano, R., Cordua, G., Miceli, G. & Chiaino, D. 2020. Analisi transitorie FEM per il dimensionamento di sistemi di smaltimento acque in gallerie esistenti. IAGIG.

Foria, F., Calicchio, M., Tarquini, A., Miceli, G., Chiaino, D., Cuccato, D., Rinaldo, S., Bomben, G., Rosetti, G. & Allegro, A. 2021. Artificial intelligence and image processing in the MIRET approach for the water detection and integrated geotechnical management of existing mechanized tunnels: methodology, algorithm and case study. *Rocscience International Conference 2021*: pp. 1–7.

Foria, F., Ferraro, R., Peticchia, E., Sannino, F. & Miceli, G. 2021. Modélisation des défauts et maintenance des tunnels existants avec une approche novatrice (MIRET): l ’ étude de cas de la ligne de chemin de fer Gênes - Vintimille et du métro de Rome. *AFTES 2021*: pp. 1–10.

Foria, F., Miceli, G., Chiaino, D. & Calicchio M. 2021. Il MIRET, verso gallerie resilienti con la trasformazione digitale e la diagnostica integrata. *L’Ufficio Tecnico*, 6.

Foria, F., Miceli, G., Nascetti, A., Loprencipe, G., Crespi, M., Belloni, V., Ravanelli, R. & cordaro, S. 2022. Digitalization and defects analysis for the maintenance of mechanized tunnels. *ITA-AITES World Tunnel Congress: WTC2022 and 47th General Assembly*.



Figure 5 MIRET and project presentation in SAIE Tunnelling Conference, on the left (Bologna, 2020) and in AFTES 2021, on the right (Paris, 2021).

B.2 Innovative characteristics of the project:

ETS and the candidate, as technical lead in the project, overcome the aforementioned issues by proposing and using MIRET (Management and Identification of the Risk for Existing Tunnels), an approach that integrates innovative equipment, technical know-how and a digital approach. MIRET employs so far:

1) ARCHITA, an ETS system for the multi-dimensional mobile mapping of tunnels that integrates laser scanner and linear cameras on a service train with a survey speed of 15-30 km/h. ARCHITA moves the inspection phase from on-field to back-office guaranteeing more reliable and cost-time efficient data (compared to e.g. visual inspection, trolley). The digitalization of the inspection is performed from the integration of HD photos and the available information. An activity previously performed with visual inspections and manual/on-foot instruments has been industrialized and digitalized. The project involved a catalogue for defects detection taking the contributes of the most cutting-edge studies

2) Both manual and artificial intelligence algorithms were implemented in MIRET for the defects detection from the HD photo (1 mm resolution) of ARCHITA linear cameras. An activity previously performed only with manual detection has been tested for automatization and brought in a digital environment

3) The objectivity of the data is reached for the technical table (owner, tester, designer, contractor) by using HD photos and digitalized data in an IT environment. The IT environment allows comparing different surveys or digitalized existing surveys to check the history of the tunnel, the condition of the defects and the effectiveness of the interventions. An activity previously performed only with technical drawings and reports based on subjective data has been automatized and digitalized

B.3 The FL's role in, and specific contribution to, the project:

The candidate performed the first visit on-site with the Owner, the Contractor and the Tester and manage the kick-off meeting to give the technical preliminary assessment for the planning of the survey activity of the team. The candidate, as technical lead of the project, ensuring the high standard of the deliverables, designed the new maintenance plan, defined technological aspects and quantity take-off thanks to the coordination of different suppliers and delivered the project in person to the Owner to discuss any further step.

The candidate was part of the developing team of ARCHITA and has been the technical lead of MIRET (Management and Identification of the Risk for Existing Tunnels), technologies and processes to solve the challenges of the project.

After the successful delivery of the project, the candidate has led a Research & Development pilot project in the company on this case study for the further implementation of ARCHITA and MIRET. The projects involved the scientific supervision and guidelines, the coordination of an internal team of 6 people and 4 different suppliers for the various specialization required and the prototype-testing phase. Main points:

- Standardization of the Clients catalogue for the defects detection of tunnel structures;
- New field test in 2020 for time history analysis from mobile mapping systems data;
- New SW implementation for the diagnostic through time;
- Extension of the automatization algorithms for the automatic detection;
- Integration of geological data, monitoring and works with multi-criteria analyses.

MIRET and the project were able to win the Ground Engineering Awards 2020 (Digital Innovation Category) and the 7th DITECFER Railway Innovation Contest, and to be a finalist in NCE TechFest 2021 for the best application artificial intelligence.



Figure 6 MIRET award for Ground Engineering Awards 2020, on the left (London-Virtual, 2020) and 7th DITECFER Railway Innovation Contest, on the right (Milan, 2021).

The project has also opened the scenario for new tunnelling applications incorporated in the Geotechnics, Geology and Hydraulics Department, the technical department managed by the candidate.

B.4 Communication with the client/end user:

The judges will positively evaluate evidence of good communication skills which contributed towards selling the project to the client.

The candidate performed the first visit on-site with the Owner (Client), the Contractor and the Tester to reassure on the tunnel conditions thanks to the strong background activities on complex mechanized tunnelling projects and Contract Management. This successful communication phase allowed the implementation of ARCHITA and MIRET that emphasized the assessment on the condition of the tunnel structures and helped implement broader strategies on the management of the line.

The candidate delivered and presented the project in person to the Owner (Client) to explain the project and ensure the solution of the targeted problems. Afterwards, the candidate and the team ensured the needed support to the assessment of the execution phase thanks to the coordination of different suppliers.

The communication with the Owner (Client) on the project is still active for the multiple purposes of Research & Development that the project has opened.

B.5 Describe the project end results and the benefits to the client/end user:

- The ARCHITA survey allowed obtaining the digitalization of the tunnel and the HD photo for the defects detection in just 2 nights of disruptions (more data, integration and objectivity in less time and with more safety)
- The HD photo allowed mapping the defects in order to have the precise condition of the lining helping the planning of the activities (more efficient design and planning). The HD photo was interweaved with the digitalization of previous inspections in order to understand the evolution of the cracking/leakages phenomena. The digitalized approach helped the integration of previous and new inspection systems
- The design and planning of the maintenance for the cracks is based on more objective data, back-office measurements (for the bill of quantity and schedule), statistical analysis (large-scale analysis for the planning by the decision-makers) and technical engineering know-how from ETS, the Owner and the Contractor
- The debate among the parties (Owner, Tester, Designer, Contractor) on technical procedures, planning of the maintenance, priority areas, etc. was solved quickly and efficiently thanks to the IT environment and relative deliverables with more objective data

The most important benefits are:

+Safety and Security: both for workers (during the survey) and users (objective-clear-repeatable outputs)

-Time and Cost: survey and diagnostic reduced in time and cost up to 60% (field campaign on 200 km of tunnels), optimized design of maintenance and possibility to implement predictive behaviour

+Objective data and -Claims: HD photo, thanks to objective data and the possibility to join a digital environment for all the parties

+Ensuring Sustainable Transport: less on-site activities, digitalization and high-detailed info on status and geometry to optimize design and work

Section C. CLIENT'S APPRECIATION OF THE CANDIDATE

Describe your working relationship with the candidate during the project, and evaluate their performance, including their communication skills.

We partnered and worked with the candidate Federico Foria many times, giving proof to deliver challenging projects in different and complex technical and management tables. The candidate Federico Foria has been involved as the main designer and is responsible for the structural and geotechnical works.

He is listed in the qualifying system RFI SQ003 in category B2 for the design of railway tunnels.

He has been involved in the following activities regulated in the contracts between MI.COS. S.p.A., the designer ETS S.r.l. and Rete Ferroviaria Italiana S.p.A.: *inspection and urgent survey for the monitoring of the cracks of the lining of the TBM tunnels of the railway line Andora-S. Lorenzo al Mare and update of the procedures for the maintenance of the defects detected (A.Q. 383-2019 C.A. n. 3); design of the civil works for the landslides between pk 83+145 and 84+022 of the railway line Genova-Ventimiglia (A.Q. n. 396-2018 C.A. n.20); design for the reconstruction of the embankment Cottalorda between the pk 81+323 e 81+160 of the railway line Ventimiglia-Breil sur Roya on behalf of SNCF (A.Q. n.605-2021 C.A. n.6).*

For the activities along the Andora-S. Lorenzo railway line, the candidate performed the first visit on-site with our team and he immediately demonstrated substantial technical skills. He was able to reassure us and the tester on the conditions of the tunnels showing determination and proficiency in the management of the activities. During the experience, he demonstrated professionalism and self-confidence. The candidate delivered and presented the project in person to guarantee the results and the solution of the targeted problems and discussed together further steps required. Afterwards, the candidate and the team ensured punctual and capable support to the assessment of the execution phase thanks to the coordination of different suppliers. The candidate has been proactive throughout the project activities to improve the results.

Recently, we finished the project and the works for the reconstruction of a collapsed embankments on the railway line Ventimiglia - Breil on behalf of SNCF (French national railway authority) and the candidate lead the design team and the support to the construction site. The *Directeur du Pôle Prospective Emergence et Maîtrise d'Ouvrage of SNCF* signed a reference letter (attached, 05/03/2022) certifying the technical and professional value of all the activities of the Contractor in which the candidate was the designer and coordinator of the technical

activities, acknowledging the synergy with the authorities involved (SNCF and the RFI) to reach the goals and ensure the reopening of the line in time.

For the aforementioned reasons, based on our experience, the candidate has the right skills and knowledge for the execution of different projects.

The activities are carried out perfectly in each stage of the design and construction phase. The communication has been effective and the knowledge is technically valid, professional and innovative.

Name and signature Daniele Mari

Job title: Director DOIT Genova

Company: Rete Ferroviaria Italiana S.p.A.



Mari Daniele
18.03.2022 08:22:51
GMT+00:00

DIRECTION GÉNÉRALE CLIENTS ET SERVICES
DIRECTION TERRITORIALE PROVENCE-ALPES-CÔTE D'AZUR
Les Docks – Atrium 10.4 – 10, Place de la Joliette
BP 85404 – 13567 Marseille CEDEX 02



Par cette lettre, nous certifions que, dans le cadre des activités menées entre janvier 2021 et novembre 2021 pour la reconstruction du talus ferroviaire du km 81+323 au km 81+153 de la ligne ferroviaire Vintimille - Breil, la société :

- ETS S.R.L. basée à Via Appia Nuova 59, 00183 Rome, numéro de TVA 03345480591, code fiscal 02245480591, en tant que société d'ingénierie en charge des études géologiques-géotechniques, de la conception et de l'assistance lors des travaux,

a mené à bien les activités en question dans les règles de l'art techniques et professionnelles, dans le respect de toutes les spécifications et délais. L'entreprise a travaillé en synergie avec le Maître d'Ouvrage SNCF Réseau et le Maître d'œuvre RFI pour atteindre les objectifs fixés.

Les activités réalisées comprenaient :

- Relevé photogrammétrique de la zone avec intégration topographique ;
- Assistance aux investigations géognostiques sur site et réalisation d'essais en laboratoire ;
- Études géologiques et géotechniques des matériaux ;
- Plan de gestion et de réutilisation des déblais et roches d'excavation ;
- Conception préliminaire des ouvrages de défense en vue du chantier de construction ;
- Conception finale des ouvrages de défense et des excavations préparatoires à la reconstruction du talus ;
- Projet exécutif pour la reconstruction du talus, incluant le plan des contrôles pendant la construction de l'ouvrage et le plan d'entretien ;
- Conception et exécution du chantier, exécution des ouvrages de défense, excavations, reconstruction et renforcement du talus ;
- Réception des matériaux, assistance à la vérification des ouvrages et à leurs essais ;
- Assistance à la Maîtrise d'Ouvrage et aux Commettants durant toutes les phases.

À ce titre, nous certifions par la présente la référence des entreprises concernant les travaux en question.

Marseille, le 5/3/2022 | 12:40:30 CET

Le Directeur du Pôle Prospective Emergence et Maîtrise d'Ouvrage

DocuSigned by:

20FEC06CC6094EE...
Patrick LARMINAT

Section D. CV OF THE CANDIDATE



Curriculum Vitae



Personal information

First name(s) / Family name(s)

Federico Foria

Business Address

Via Felice Casati, 32 – Milano

Phone number(s)

+39 02 2217 99 80

Cell: +39 334 3759251

E-mail address

federico.foria@etsingegneria.it

Nationality

Italian

Date of birth

29/09/1989

Work experience

Dates

2019 - today

Occupation or position held

Manager of Geotechnics, Geology and Hydraulics Department
Manager of Research & Development Department

Main activities and responsibilities

Manage technical and design process of the GGH project from Feasibility, Concept Design, Detailed Design, Design to Construction, and Handover; Responsible for the technical and professional growth of the team and of each member; Preparation of Maintenance Manuals and Environmental Process; Responsible for the integration of the Disciplines in the Design Process; Construction Management; Design cost estimating; Project Management.

Key Projects: TEN-T tunnels, Porto di La Spezia, Parma-S.Zeno railway, Genova-Ventimiglia railway, Stazione Pigneto.

Key R&D/MKTG/BD Responsibilities: R&D Technical Manager; New workflow with Marketing/Business Development Manager for tenders, bid, B2B, liaison with internal/external companies and clients; Company delegate in professional associations (SIG, ITA-AITES, AGI) and national/international working groups for Geotechnics and Tunnelling; Authoring papers and presenting works in national and international venues; Preparing submission and leading the process for national and international awards.

Name and address of employer

ETS Srl – Via Appia Nuova 59, Rome & Via Felice Casati 32, Milan (Italy)

Type of business or sector

Civil engineering

Dates

2016, 2017 - 2019

Occupation or position held

Project Engineer

Main activities and responsibilities	Designer and internal coordinator of the Geotechnical and Tunnelling projects from Concept Design, Detailed Design, Design to Construction, and Handover/Maintenance; Preparation of bids and technical part of tenders; Company delegate in professional associations (SIG, ITA) and national/international working groups.
Name and address of employer	Key Projects: Brennero Tunnel, Cefalù Tunnel, Nenskra Dam, 3rd Bosphorus Bridge, Grand Paris Ligne 16-17, Torino-Lione, Metro Riyadh, St. Oyen-Étroubles, Napoli-Bari Apica-Hirpinia.
Type of business or sector	Lombardi Ingegneria Srl - Via Giotto 36, Milan (Italy)
Dates	Civil engineering
Occupation or position held	2017
Main activities and responsibilities	Researcher
Name and address of employer	Research on advanced constitutive models, tunnels and rock mechanics in the Competence Centre Geo-engineering; Team leader of the Documentation Team and responsible for the technical-engineering contents of the manuals.
Type of business or sector	Bentley Plaxis – Computerlaan 14, Delft (Netherlands)
Dates	Software house
Occupation or position held	2017 - 2019
Main activities and responsibilities	Geotechnical Consultant
Name and address of employer	Consultant in charge of the special geotechnical works for building, Detailed Design, Design to Construction, Investigation campaign.
Type of business or sector	Key Projects: Lugano Brè-109, Vacallo-175/176, Lugano Pregassona-1861, Neggio-306, Mendrisio-2065/2079, Balerna-752/754.
Dates	D'Alessandro & Partners – Via G. e F. Ciani, Lugano (Switzerland)
Occupation or position held	Civil engineering
Main activities and responsibilities	2010 - 2011
Name and address of employer	GIS Technician
Type of business or sector	Remote sensing tasks (orthorectification and orientation of EROS-B stereo pairs); GIS database design; Support to tenders, bids and marketing. The projects are summed up in three authored papers in a national journal (see Papers).
Dates	IPTsat Srl – Via Sallustiana, Rome (Italy)
Occupation or position held	Geomatics
Education and training	
Dates	2015 - 2016
Title of qualification awarded	II Level Master in Geotechnical Design
Principal subjects/occupational skills covered	Geotechnical modelling, Soil and rock characterization, Geomechanics, Slopes stability, Tunnels and underground structures, Retaining structures, Laboratory
Name and type of organisation providing education and training	University of Rome La Sapienza
Level in national or international classification	EQF8
Dates	2013 - 2015
Title of qualification awarded	Master of Engineering in Structural and Geotechnical Engineering



Principal subjects/occupational skills covered	Foundations, Earthquake engineering, Seismic geotechnics, Tunnelling and underground structures, Consolidation of soils and rocks, Reinforced concrete structures, Mix structures, Fire design, Limit analyses
Name and type of organisation providing education and training	University of Napoli Federico II
Level in national or international classification	EQF7
Dates	2010 - 2013
Title of qualification awarded	Bachelor of Engineering in Environmental Engineering
Principal subjects/occupational skills covered	GIS, Regional planning, Construction technics and science, Geotechnics, Environmental plants, Hydraulics and hydraulic infrastructures, Transportation systems
Name and type of organisation providing education and training	University of Napoli Federico II
Level in national or international classification	EQF6
Dates	2009-2011
Title of qualification awarded	Certificate of Higher Education in Environmental Technician with GPS, GIS and Remote Sensing
Principal subjects/occupational skills covered	GIS, GPS, Remote sensing (active and passive), Topography, Geology, Regional Planning, IT infrastructures, Environmental economy, Environmental planning, Private law
Name and type of organisation providing education and training	Sacro Cuore' Institute with University of Naples 'Parthenope' and IREA
Level in national or international classification	EQF5

Personal skills and competences

Mother tongue(s) **Italian**

Other language(s)

Self-assessment

European level ()*

English (TOEFL)

French

Dutch

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Advanced	C1	Advanced	C1	Advanced	C1	Advanced	C1	Advanced
		A1	Elementary						
		A1	Elementary						

Social skills and competences Effective communication, empathy, emotional intelligence, positivity, cooperation and teamwork

Organisational skills and competences Leadership, cooperation and teamwork, setting goals, working under pressure, analytical thinking, self-motivation, communication, creativity, attention to detail

Technical skills and competences I am a Geotechnical Engineer master who graduated with a First honours degree and first place in the national ranking of the II level Master in Geotechnical Design at the University of Rome la Sapienza. I have working experience in the geotechnical/structural field as a Researcher, Advisor, Designer and Manager. I'm experienced in the design of geotechnical works, both national and international projects, as part of a team and as a team leader/project manager.

Computer skills and competences ECDL GIS, Geotechnical Engineering SW, Structural Engineering SW, Planning SW, Microsoft and Office, CAD SW, BIM SW, Adobe Suite SW

Hobbies and activities

Blood donor at Azienda ospedaliera di rilievo nazionale Antonio Cardarelli
2010 - in progress

Playing music; writing essays, books and scripts; theatre:

- Writer of *Il Merlo e il Corvo* – I racconti di Foce di Quinsia (2020), novel published by Elison Publishing
- Music project *An Electronic Hero*: 1° Prize - Best music video, Short of the Month (IND) (2015) with the video clip of the song *Sun*; 1° Prize - Album of the month at *Traks* magazine (ITA) (2015) with the EP *An Electronic Sphere*; >200.000 total views of the EP *After Universe* (2017) and the video clip of the song *After Universe*
- Producer of the TV format *Learning to Fly - Your music in tv, Free: OraTV* (IT) and on the web (2012)
- Creator and scriptwriter of the video clip *ARCYmysteryBAND – 500*, winner of the *Fiat* contest (2010)
- 1° Prize - Folk music orchestra in the national contest *Dialetti a confronto* (ITA) (2008)
- 1° Prize - Solo pianist at the national contest *Giovani Musicisti di S. Antonio Abate* (ITA) (2002)

Papers published

Il MIRET, verso gallerie resilienti con la trasformazione digitale e la diagnostica integrata. *Passaggi sicuri – L'Ufficio Tecnico* | Foria et al. | June 2021

Artificial intelligence and image processing in the MIRET approach for the water detection and integrated geotechnical management of existing mechanized tunnels: methodology, algorithm and case study. *Rocscience International Conference* | Foria et al. | April 2021

Mitigation measures for the protection of working railway lines from landslides: the case study of Altare and Santuario. *Rocscience International Conference* | Foria et al. | April 2021

Galleria Olmata, from survey to construction: an integrated design approach for the renewal of railway tunnels. *World Tunnel Congress 2020* | Foria, Giordano, Tommasi, Miceli | Settembre 2020

Galleria Olmata, dal rilievo alla costruzione: un approccio integrato di progetto per l'adeguamento di gallerie ferroviari. *Rivista Gallerie* | Foria, Pacilli, Collura, Giordano, Miceli | December 2019

ARCHITA: an innovative multidimensional mobile mapping system for tunnels and infrastructures. *3th Smart Underground Space* | Foria, Ferraro, Avancini, Peticchia, Miceli | November 2019

SIG WG 2 - Damages of Segmental Lining. *Società Italiana Gallerie* | SIG WG 2 (Pizzarotti, Foria & others) | May 2019

Implementation, validation and application of PM4Sand model in PLAXIS. *5th Geotechnical Earthquake Engineering Soil Dynamics V 2018* | Vilhar, Brinkgreve, Foria, Laera | November 2018

Plaxis 2D 2018 – Manuals. *Plaxis bv* | Brinkgreve, Kumarswamy, Swolfs, Foria | March 2018

Plaxis 3D 2017 – Manuals. *Plaxis bv* | Brinkgreve, Kumarswamy, Swolfs, Foria | September 2017

Interazione tra fenomeni di instabilità e tessuto urbano di alcuni centri storici dell'Italia centro-settentrionale XXVI Convegno Nazionale di Geotecnica | Tommasi, Foria | May 2017

Numerical analyses of the performance of seismically isolating buried barriers. *6th Conference on Earthquake Engineering* | Flora, Bilotta, Foria, Nappa | December 2015

Soft Deep Mixing for the mitigation of seismic risk. *Deep Mixing Conference 2015* | Flora, Bilotta, Foria, Nappa | November 2015

Incontro tra i Sistemi Informativi Geografici e la Geopolitica: il caso della Crimea. *GEOmedia* | Foria, Cavaliere | November 2014

Modello fisico e realizzazione di un Sistema Informativo Territoriale per la gestione selvicolturale. *GEOmedia* | Foria | November 2013

Creare cartografia digitale grazie al GIS e al Remote Sensing. *GEOmedia* | Foria | October 2013

Public speaking experience

Conferences, workshops, education, university courses, working groups, association activities, fairs, either national or international

Membership of professional organisations

Ordine degli Ingegneria Napoli (Chartered status) | Professional association | Member, since 2017
Società Italiana Gallerie (Italian Tunnelling Society) | Professional association | Member, since 2015
Associazione Geotecnica Italiana (Italian Geotechnical Society) | Professional association | Member, since 2020