

## LUCA BIANCHINI CIAMPOLI

**PHD THESIS** Bianchini Ciampoli, L., Towards the non-destructive assessment of mechanical properties in roads and railways: new concepts and methodologies, Ph.D. Thesis, XXX Doctoral cycle, Civil Engineering Section, Department of Engineering, Roma Tre University, 2018

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- SELECTED PAPERS**
1. Benedetto, A., Brancadoro, M.G., Bianchini Ciampoli, L., Alani, A.M., Tosti, F., 2017, A novel computer-aided model for the simulation of railway ballast by random sequential adsorption process. *Computer-Aided Civil and Infrastructure Engineering*, 33(3), pp. 243-257 [I.F. 11.77]
  2. Bianchini Ciampoli, L., Gagliardi, V., Clementini, C., Latini, D., Del Frate, F., Benedetto, A., 2020, Transport Infrastructures monitoring by InSAR and GPR data fusion, *Surveys in Geophysics*, 41(3), pp. 371-394 [I.F. 6.67]
  3. Bianchini Ciampoli, L., Gagliardi, V., Ferrante, C., Calvi, A., D'Amico, F., Tosti, F., 2020, Displacement monitoring in airport runways by persistent scatterers SAR interferometry, *Remote Sensing*, 12(21), pp. 1-14, 3564 [I.F. 4.85]
  4. Bianchini Ciampoli, L., Calvi, A., D'Amico, F., 2019, Railway ballast monitoring by GPR: A test-site investigation, *Remote Sensing*, 11(20), 2381 [I.F. 4.85]
  5. Benedetto, A., Tosti, F., Bianchini Ciampoli, L., D'Amico, F., 2017, A review of ground-penetrating radar signal processing techniques for advanced road inspections. *Signal Processing*, 132C, 201-209 [I.F. 4.66]
  6. D'Amico, F., Gagliardi, V., Bianchini Ciampoli, L., Tosti, F., 2020, Integration of InSAR and GPR techniques for monitoring transition areas in railway bridges, *NDT and E International*, 115, 102291 [I.F. 3.79]
  7. Bianchini Ciampoli, L., Brancadoro, M.G., Tosti, F., D'Amico, F., Alani, A.M., Benedetto, A., 2017, A spectral analysis of ground-penetrating radar data for the assessment of the railway ballast geometric properties. *NDT and E International*, 90, pp. 9-47 [I.F. 3.79]
  8. Calvi, A., D'Amico, F., Ferrante, C., Bianchini Ciampoli, L., 2021, Evaluation of augmented reality cues to improve the safety of left-turn maneuvers in a connected environment: A driving simulator study, *Accident Analysis and Prevention*, 148, 105793 [I.F. 4.99]
  9. Tosti, F., Bianchini Ciampoli, L., D'Amico, F., Alani, A. M., Benedetto, A., 2018, An experimental based model for the assessment of the mechanical properties of road pavements using GPR, *Construction & Building Materials*, 165, pp. 966-974 [I.F. 6.14]
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10. Bianchini Ciampoli, L., Tosti, F., Economou, N., Benedetto, F., 2019, Signal processing of GPR data for road surveys, *Geosciences (Switzerland)*, 9(2), 96 [I.F. 2.68]
  11. Artagan, S.S., Bianchini Ciampoli, L., D'Amico, F., Calvi, A., Tosti, F., 2020, Non-destructive Assessment and Health Monitoring of Railway Infrastructures, *Surveys in Geophysics*, 41(3), pp. 447-483 [I.F. 6.67]
  12. Calvi, A., D'Amico, F., Ferrante, C., Bianchini Ciampoli, L., 2020, Effectiveness of augmented reality warnings on driving behaviour whilst approaching pedestrian crossings: A driving simulator study, *Accident Analysis and Prevention*, 147, 105760 [I.F. 4.99]
  13. Calvi, A., D'Amico, F., Ferrante, C., Bianchini Ciampoli, L., 2020, A driving simulator study to assess driver performance during a car-following maneuver after switching from automated control to manual control, *Transportation Research Part F: Traffic Psychology and Behaviour*, 70, pp. 58-67 [I.F. 3.21]
  14. D'Amico, F., Bianchini Ciampoli, L., Di Benedetto, A., Bertolini, L., Napolitano, A., 2022, Integrating Non-Destructive Surveys into a Preliminary BIM-Oriented Digital Model for Possible Future Application in Road Pavements Management, *Infrastructures*, 7(1), 10
  15. Bianchini Ciampoli, L., Gagliardi, V., Calvi, A., D'Amico, F., Tosti, F., Automatic network-level bridge monitoring by integration of InSAR and GIS catalogues, *Proceedings of SPIE - The International Society for Optical Engineering*, 2019, 11059
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Rome, 17.03.2022

LUCA BIANCHINI CIAMPOLI

## LUCA BIANCHINI CIAMPOLI

**LAST POSITION** Research Fellow - Department of Engineering, Roma Tre University

### RESEARCH INDEXES

Source (17.03.22)	Papers	Citations	h-index
Scopus	70	704	16
Google Scholar	120	877	17

**QUALIFICATION** Qualified as Associate Professor in the sector 08/A3 “Infrastructures and transport systems, appraisal and valuation”, 20.11.2020

### RESEARCH INTERESTS

- Data processing of GPR signals for health assessments of transport networks’ superstructures;
- Use of space-borne remote sensing data for inspecting the vulnerability of critical transport infrastructures to major geohazards;
- Integration and data fusion of various non-destructive testing (NDT) methods and remote sensing techniques for resilience analyses of transport networks;
- Safety audit of road designs by means of virtual reality driving simulation;
- Use of NDT and Remote sensing for preventive archaeology surveys prior to civil work sites opening.

**EDUCATION** **PH.D. EUROPEAN LABEL, 2014-2018**

Civil Engineering Section, Dept. of Engineering, Roma Tre University

Thesis: “Towards the non-destructive assessment of mechanical properties in roads and railways: new concepts and methodologies”. Supervisor: Prof. Andrea Benedetto.

**M.SC., 2011-2014**

Transport Infrastructures Eng., Dept. of Engineering, Roma Tre University

Experimental Thesis “Frequency-based evaluation of the physical properties of load-bearing soils through GPR” developed at Technische Universiteit Delft, Delft (NL). Supervisor: Prof. Andrea Benedetto; Co-supervisor: Prof. Evert Slob, TU Delft. Rating: 110/110.

**B.SC., 2008-2011**

Civil Engineering Section, Dept. of Engineering, Roma Tre University  
Thesis “Infrastructures and facilities for the navigability on river Tiber and its integration to the transport system”. Supervisor: Prof. Alessandro Calvi,  
Rating: 105/110

**HIGH SCHOOL DEGREE, 2003-2008**

Liceo Classico F. Vivona, Roma

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**ACADEMIC  
APPOINTMENTS**

**RESEARCH FELLOWSHIP, 2020-2021**

Civil Engineering Section, Dept. of Engineering, Roma Tre University  
Research Topic: “Development of assessment methodologies for the sustainability and resilience of linear transport infrastructures”. Supervisor: Prof. Alessandro Calvi.

**RESEARCH FELLOWSHIP, 2017-2020**

Civil Engineering Section, Dept. of Engineering, Roma Tre University  
Research Topic: “Development of advanced methodologies based on non-destructive techniques for an efficient and effective maintenance of railway, highway and airport superstructures”. Supervisor: Prof. Maria Rosaria De Blasiis.

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**OTHER  
APPOINTMENTS**

**ASSOCIATE PROFESSOR QUALIFICATION, 2020**

Ministry for University and Research (MUR)  
Italian qualification (Abilitazione Scientifica Nazionale) to Associate Professor in the sector 08/A3 “INFRASTRUTTURE E SISTEMI DI TRASPORTO, ESTIMO E VALUTAZIONE” since 20.11.2020.

**PROFESSIONAL ENGINEER QUALIFICATION, 2014**

Professional Board of Engineers, Rome  
Abilitation to professional civil engineer practice acquired in December 2014.

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**NATIONAL  
TEACHING  
EXPERIENCES**

**ASSISTANT PROFESSOR, 2020-2022**

Course: Technical Design, Roma Tre University  
Assistant professor for the course Technical Design, at the B.Sc. course in Civil Engineering, Holder: Prof. Andrea Benedetto

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### **ASSISTANT PROFESSOR, 2016-2019**

Course: Computational Applications in Civil Engineering Design, Roma Tre University

Assistant professor for the course Computational Applications in Civil Engineering Design, Roma Tre University, at the B.Sc. course in Civil Engineering, Holder: Prof. Alessandro Calvi

### **ASSISTANT PROFESSOR, 2014-2017**

Course: Road materials

Assistant professor for the course Road Materials, Roma Tre University, at the M.Sc. course in Transport and Infrastructure Engineering, Holder: Prof. Alessandro Calvi

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## **INTERNATIONAL TEACHING EXPERIENCES**

### **INVITED SPEAKER, 2021**

School of Computing and Engineering, University of West London

Lecture entitled “Inspecting railway ballast by Ground Penetrating Radar: from laboratory to real scale research” taken within the event “Computing and Engineering Research Seminars”

### **INVITED SPEAKER, 2016**

Roma Tre University

Lecture entitled “Civil Engineering Application of Ground Penetrating Radar” taken within the event “Dissemination day on GPR” organized by COST ACTION TU1208

### **LECTURER, 2016**

Roma Tre University

Lecturer of several lectures within the framework of cultural exchange between Roma Tre University and Iowa State University on the topic of “Innovations in Pavement Maintenance & Rehabilitation”.

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## **NATIONAL RESEARCH EXPERIENCES**

### **PROJECT “MLAZIO”, 2021-2023**

Funding body: Regione Lazio

Member of the project aimed at redacting regional-level guidelines for the monitoring and management of the bridges and viaducts included into the major highway network. Main related scientific contributions:

- Gagliardi, V., Bianchini Ciampoli, L., Bertolini, L., Pallante, L., Napolitano, A., Manalo, J.R., D’Amico, F., Gestione e monitoraggio di opere in elevazione a livello di rete: implementazione di un catalogo GIS-based e integrazione di dati radar satellitari nell’ambito del progetto MLazio, Convegno FABRE, 2-4 February, 2022.

### **PROJECT “BIMHERIT”, 2021-2023**

**Funding body: Regione Lazio, Call: DTC Lazio**

Member of the project aimed at developing a BIM-based methodology for supporting holders of archaeological complex in managing their asset in regard to possible interferences with civil engineering activities and valorization projects. Main related scientific contributions:

- D’Amico, F., Bianchini Ciampoli, L., Di Benedetto, A., Bertolini, L., Napolitano, A., Integrating Non-Destructive Surveys into a Preliminary BIM-Oriented Digital Model for Possible Future Application in Road Pavements, Infrastructures, 7(1), 10, 2022.

### **PROJECT “STRAIN2”, 2020**

**Funding body: European Space Agency (ESA), Call: EO hops**

Principal Investigator of the project “STRAIN2: Sensing Transport Infrastructure” focusing on the integration of interferometric satellite-data with GPR surveys for efficient monitoring of linear transport networks. Main related scientific contributions:

- Gagliardi, V. Bianchini Ciampoli, L., Trevisani, S., Alani, A.M., Benedetto, A., Tosti, F., Testing sentinel-1 SAR interferometry data for airport runway monitoring: A geostatistical analysis, Sensors, 21(17), 5769, 2021
- Bianchini Ciampoli, L., Calvi, A., Di Benedetto, A., Fiani, M., Gagliardi, V., Ground penetrating radar (gpr) and mobile laser scanner (mls) technologies for non-destructive analysis of transport infrastructures, Proceedings of SPIE - The International Society for Optical Engineering, 11863, 118630R, 2021

### **PROJECT “VAGARE”, 2020-2023**

**Funding body: Regione Lazio, Call: Gruppi di Ricerca 2020**

Member of the Project “VaGAre: valorizzazione green di aree fragili ad elevato potenziale culturale, storico e naturalistico” related to the use of space-borne data and transport mobility data for detecting vulnerable areas and proposing valorization interventions.

### **PROJECT “MOBI”, 2020**

**Funding body: European Space Agency (ESA), Call: EO hops**

Member of the project “MOBI: Monitoring Bridges and Infrastructure Networks” focusing on Interferometric SAR analysis (InSAR) for displacement detection in bridges and viaducts. Main related scientific contributions:

- Gagliardi, V., Tosti, F., Bianchini Ciampoli, L., D’Amico, F., Alani, A.M., Battagliere, M.L., Benedetto, A., Monitoring of bridges by MT-

InSAR and unsupervised machine learning clustering techniques, Proceedings of SPIE - The International Society for Optical Engineering, 11863, 118630I, 2021

- Gagliardi, V., Bianchini Ciampoli, L., D'Amico, F., Alani, A.M., Tosti, F., Benedetto, A., Multi-temporal SAR interferometry for structural assessment of bridges: The rochester bridge case study, Selected Papers from the International Airfield and Highway Pavements Conference 2021, 2021, pp. 308-319
- D'Amico, F., Gagliardi, V., Bianchini Ciampoli, L., Tosti, F., An integrated investigative approach in health monitoring of masonry arch bridges using GPR and InSAR technologies, NDT and E Int., 2020, 115

### **PROJECT “STRAIN”, 2019**

**Funding body: European Space Agency (ESA), Call: EO hops**

Member of the project “STRAIN: Sensing Transport Infrastructure” focusing on the integration of remote sensing and non-destructive ground-based techniques for monitoring linear transport infrastructures. Main related scientific contributions:

- Clementini, C., Latini, D., Gagliardi, V., Bianchini Ciampoli, L., D'Amico, F., Del Frate, F., Synergistic monitoring of transport infrastructures by multi-Temporal InSAR and GPR technologies: A case study in Salerno, Italy, Proceedings of SPIE - The International Society for Optical Engineering, 11863, 118630K, 2021
- Gagliardi, V., Bianchini Ciampoli, L., D'Amico, F., Alani, A.M., Tosti, F., Benedetto, A., A novel geo-statistical approach for transport infrastructure network monitoring by Persistent Scatterer Interferometry (PSI), IEEE National Radar Conference, 2020

### **PROJECT “EXTRA-TN”, 2019-2022**

**Funding body: Ministry for University and Research (MUR), Call: PRIN2017**

Member of the PRIN project “EXTRA-TN: EXTENDED Resilience Analysis of Transport Networks” aimed at proposing novel integrated methodologies for health assessments of transport networks by means of ground-based, air-based and space-borne surveys. Main related scientific contributions:

- Ferrante, C., Bianchini Ciampoli, L., Benedetto, A., Alani, A.M., Tosti, F., Non-destructive technologies for sustainable assessment and monitoring of railway infrastructure: a focus on GPR and InSAR methods, Environmental Earth Sciences, 2021, 80(24), 806
- Bianchini Ciampoli, L., Gagliardi, V., Ferrante, C., Calvi, A., D'Amico, F., Tosti, F., Displacement monitoring in airport runways by persistent scatterers SAR interferometry, Remote Sensing, 2020, 12(21), pp. 1-14, 3564

- D'Amico, F., Gagliardi, V., Bianchini Ciampoli, L., Tosti, F., Integration of InSAR and GPR techniques for monitoring transition areas in railway bridges, NDT and E International, 2020, 115, 102291
- Bianchini Ciampoli, L., Calvi, A., D'Amico, F., Railway ballast monitoring by GPR: A test-site investigation, Remote Sensing, 2019, 11(20), 2381

#### **PROJECT “ARCHAEOTRACK”, 2017-2020**

**Funding body: Regione Lazio, Call: Gruppi di Ricerca 2020**

Member of the project “ArchaeoTrack: preventive archaeology towards a diffused virtual museum” aimed at developing novel GPR-based algorithms for detecting and valorizing buried archaeological remains prior to the opening of civil engineering worksites. Main related scientific contributions:

- Bianchini Ciampoli, L., Santarelli, R., Loreti, E.M., Ten, A., Benedetto, A., Structural detailing of buried Roman baths through GPR inspection, Archaeological Prospection, 2020
- Bianchini Ciampoli, L., Economou, N., Santarelli, R., Prospecting an archaeological site by GPR: The case study of the buried necropolis Laurentina, International Conference on Telecommunications and Signal Processing, TSP 2020, 2020, pp. 329-332, 9163454
- Bianchini Ciampoli, L., Santarelli, R., Tosti, F., Benedetto, A., GPR for preventive conservation and valorisation of buried archaeology, International Workshop on Advanced Ground Penetrating Radar, 2019

#### **INTERNATIONAL RESEARCH EXPERIENCES**

##### **COST ACTION TU1208, 2013-2016**

**Funding body: EU COST ACTION, Horizon 2020**

Member of the Transport and Urban Development COST ACTION TU1208 “Civil Engineering Application of Ground Penetrating Radar” network as participant to Working Group 2: “GPR surveying of pavements, bridges, tunnels and buildings; underground utility and void sensing”

##### **VISITING RESEARCHER, 2015**

**School of Computing and Engineering, University of West London**

Short Time Scientific Mission (STSM) at University of West London, London (UK) in the framework of COST ActionTU1208. The research topic was related to the application of GPR to the monitoring of highway tunnels.

##### **ATTENDEE, 2014-2019**

- **Società Italiana delle Infrastrutture Viarie, Bolzano, Italy**  
Attendee to the “SIIV International Winter School: Fundamentals for Innovative Research in Sustainable Transportation” organized by SIIV, Moena, Bolzano, Italy, 15-18 December 2019

- **Beijing Jiaotong University, Beijing, China**  
Attendee to the “Summer School of Sino-EU Doctoral School for Logistics, Information, Management, and Service Science” held at Beijing Jiaotong University in Beijing, 21-30 August 2015
- **University of West London, London, UK**  
Attendee to the Training School “Ground Penetrating Radar for road-pavement assessment and detection of buried utilities” organized by the COST Action TU1208, London, UK, 12-14 October 2015
- **Cracow University of Technology, Cracow, PL**  
Attendee to the Training School “Applications of Ground Penetrating Radar in Urban Areas: the Sensitive case of Historical Cities” organized by the COST Action TU1208, Cracow, Poland, 5-7 May 2015
- **University of Pisa, Pisa, IT**  
Attendee to the Training School “Civil Engineering Applications of Ground Penetrating Radar” organized by the COST Action TU1208, Pisa, Italy, 22-25 September 2014

#### VISITING RESEARCHER, 2014

Department of Geosciences, Technische Universiteit Delft  
Research period at the Technical University of Delft, Delft (NL) focusing on the application of GPR to the detection of clayey fine materials within highway superstructures.

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#### RESEARCH ACTIVITY SUMMARY

#### BIBLIOMETRIC INDEXES

Source *Scopus*, 17.03.2022

Indexed articles	70
Citations	704
h-index	16
Average citations	10.06
Total Impact Factor	62.43
Maximum Impact Factor	11.77
Average Impact Factor	4.46

LINKS: [SCOPUS](#); [PUBLONS](#); [ORCID](#)

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## SELECTED PAPERS

1. Benedetto, A., Brancadoro, M.G., Bianchini Ciampoli, L., Alani, A.M., Tosti, F., 2017, A novel computer-aided model for the simulation of railway ballast by random sequential adsorption process. *Computer-Aided Civil and Infrastructure Engineering*, 33(3), pp. 243-257 [I.F. 11.77]
2. Bianchini Ciampoli, L., Gagliardi, V., Clementini, C., Latini, D., Del Frate, F., Benedetto, A., 2020, Transport Infrastructures monitoring by InSAR and GPR data fusion, *Surveys in Geophysics*, 41(3), pp. 371-394 [I.F. 6.67]
3. Bianchini Ciampoli, L., Gagliardi, V., Ferrante, C., Calvi, A., D'Amico, F., Tosti, F., 2020, Displacement monitoring in airport runways by persistent scatterers SAR interferometry, *Remote Sensing*, 12(21), pp. 1-14, 3564 [I.F. 4.85]
4. Bianchini Ciampoli, L., Calvi, A., D'Amico, F., 2019, Railway ballast monitoring by GPR: A test-site investigation, *Remote Sensing*, 11(20), 2381 [I.F. 4.85]
5. Benedetto, A., Tosti, F., Bianchini Ciampoli, L., D'Amico, F., 2017, A review of ground-penetrating radar signal processing techniques for advanced road inspections. *Signal Processing*, 132C, 201-209 [I.F. 4.66]
6. D'Amico, F., Gagliardi, V., Bianchini Ciampoli, L., Tosti, F., 2020, Integration of InSAR and GPR techniques for monitoring transition areas in railway bridges, *NDT and E International*, 115, 102291 [I.F. 3.79]
7. Bianchini Ciampoli, L., Brancadoro, M.G., Tosti, F., D'Amico, F., Alani, A.M., Benedetto, A., 2017, A spectral analysis of ground-penetrating radar data for the assessment of the railway ballast geometric properties. *NDT and E International*, 90, pp. 9-47 [I.F. 3.79]
8. Calvi, A., D'Amico, F., Ferrante, C., Bianchini Ciampoli, L., 2021, Evaluation of augmented reality cues to improve the safety of left-turn maneuvers in a connected environment: A driving simulator study, *Accident Analysis and Prevention*, 148, 105793 [I.F. 4.99]
9. Tosti, F., Bianchini Ciampoli, L., D'Amico, F., Alani, A. M., Benedetto, A., 2018, An experimental based model for the assessment of the mechanical properties of road pavements using GPR, *Construction & Building Materials*, 165, pp. 966-974 [I.F. 6.14]
10. Bianchini Ciampoli, L., Tosti, F., Economou, N., Benedetto, F., 2019, Signal processing of GPR data for road surveys, *Geosciences (Switzerland)*, 9(2), 96 [I.F. 2.68]
11. Artagan, S.S., Bianchini Ciampoli, L., D'Amico, F., Calvi, A., Tosti, F., 2020, Non-destructive Assessment and Health Monitoring of Railway Infrastructures, *Surveys in Geophysics*, 41(3), pp. 447-483 [I.F. 6.67]
12. Calvi, A., D'Amico, F., Ferrante, C., Bianchini Ciampoli, L., 2020, Effectiveness of augmented reality warnings on driving behaviour whilst approaching pedestrian crossings: A driving simulator study, *Accident Analysis and Prevention*, 147, 105760 [I.F. 4.99]

13. Calvi, A., D'Amico, F., Ferrante, C., Bianchini Ciampoli, L., 2020, A driving simulator study to assess driver performance during a car-following maneuver after switching from automated control to manual control, *Transportation Research Part F: Traffic Psychology and Behaviour*, 70, pp. 58-67 [I.F. 3.21]
14. D'Amico, F., Bianchini Ciampoli, L., Di Benedetto, A., Bertolini, L., Napolitano, A., 2022, Integrating Non-Destructive Surveys into a Preliminary BIM-Oriented Digital Model for Possible Future Application in Road Pavements Management, *Infrastructures*, 7(1), 10
15. Bianchini Ciampoli, L., Gagliardi, V., Calvi, A., D'Amico, F., Tosti, F., Automatic network-level bridge monitoring by integration of InSAR and GIS catalogues, *Proceedings of SPIE - The International Society for Optical Engineering*, 2019, 11059

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**EDITORIAL  
COMMITTEE  
EXPERIENCES**

**GUEST EDITORSHIP**

▪ **Journal: Remote Sensing**

Guest Editor of the Special Issue “Advances in Signal Processing Techniques for Ground Penetrating Radar Applications”, 2021.

▪ **Journal: Infrastructures**

Guest Editor of the Special Issue “Research and Developments in Pavements”, 2021

▪ **Journal: Non Destructive Testing & Evaluation International**

Guest Editor of the Special Issue “Data Fusion, Integration and Advances of Non-Destructive Testing Methods in Civil and Environmental Engineering.”, 2020

**REVIEWING ACTIVITY**

Peer review activity for the following journals:

- Construction and Building Materials;
- Non Destructive Testing and Evaluation International;
- Signal Processing;
- IEEE JSTAR;
- Surveys in Geophysics;
- Journal of Applied Geophysics;
- Remote Sensing;
- Sensors;
- Measurement;
- Transportation Geotechniques;
- International Journal of Pavement Engineering

#### CHAIRMAN

- **Earth Resources and Environmental Remote Sensing/GIS Applications (SPIE2021)**

Session: “Theories and Applications of Satellite Remote Sensing and Ground-Based Non-destructive Technologies in Civil and Environmental Engineering”, 12 September 2021, Virtual Event.

- **European Geosciences Union General Assembly (EGU2019)**

Session: “Data fusion, integration, correlation and advances of non-destructive testing methods and numerical developments for engineering and geosciences applications”, 7-12 April 2019, Vienna, Austria.

- **Int. Conf. on Telecommunications and Signal Processing (TSP2018)**

Session: “1st International Workshop on Signal Processing Techniques for Ground Penetrating Radar Applications (SPT4GPRA 2020)”, 4-6 June 2018, Athens, Greece.

- **European Geosciences Union General Assembly (EGU2018)**

Session: “Data fusion, integration, correlation and advances of non-destructive testing methods and numerical developments for engineering and geosciences applications”, 8-13 April 2018, Vienna, Austria.

#### SPEAKER

- **Earth Resources and Environmental Remote Sensing/GIS Applications (SPIE2021)**

Presentation: “Synergistic monitoring of transport infrastructures by multi-Temporal InSAR and GPR technologies: A case study in Salerno, Italy”, 12 September 2021, Virtual Event

Authors: Clementini, C., Latini, D., Gagliardi, V., Bianchini Ciampoli, L., Damico, F., Del Frate, F.

- **Int. Airfield and Highway Pavements Conference (T&DI ASCE 2021)**

Presentation: “Integrated non-destructive survey for the prediction of remaining servicing life of airfield APRONS”, 8-10 June 2021, Virtual Event

Authors: Bianchini Ciampoli, L., Calvi, A., Di Benedetto, A., Fiani, M., Gagliardi, V.

- **IEEE National Radar Conference 2020**

Presentation: “A novel geostatistical approach for transport infrastructure network monitoring by Persistent Scatterer Interferometry (PSI)”, 21-25 September 2020, Virtual Event

Authors: Gagliardi, V., Ciampoli, L.B., D'Amico, F., Alani, A.M., Benedetto, A.

- **Earth Resources and Environmental Remote Sensing/GIS Applications 2020 (SPIE2020)**

Presentation: “Health monitoring approach for transport infrastructure and bridges by satellite remote sensing Persistent Scatterer Interferometry (PSI)”, 21-25 September 2020, Virtual Event

Authors: Benedetto, A., Bianchini Ciampoli, L., D'Amico, F., Alani, A.M., Tosti, F.



Presentation: “The ArchaeoTrack Project: Use of Ground Penetrating Radar for Preventive Conservation of Buried Archaeology Towards the Development of a Virtual Museum”, 22-24 October 2018, Cassino, Italy

Authors: Bianchini Ciampoli, L., Benedetto, A., Tosti, F.

- **Int. Conference on Telecommunications and Signal Processing (TSP2018)**

Presentation: “A GPR spectral-based processing method for minimisation of concrete sleepers effects in railway ballast investigations”, 4-6 June 2018, Athens, Greece

Authors: Bianchini Ciampoli, L., Artagan, S.S., Tosti, F., Calvi, A., Alani, A.M., Benedetto, A.

- **International Conference on Ground Penetrating Radar (GPR2018)**

Presentation: “A comparative investigation of the effects of concrete sleepers on the GPR signal for the assessment of railway ballast”, 18-21 June 2018, Rapperswil, Switzerland

Authors: Bianchini Ciampoli, L., Artagan, S.S., Tosti, F., Alani, A.M., Benedetto, A.

- **International Conference Road Safety and Simulation (RSS2017)**

Presentation: “Evaluation of the impact of pavement degradation on driving comfort and safety using a dynamic simulation model”, 17-19 October 2018, The Hague, The Netherlands

Authors: D’Amico, F., Calvi, A., Bianchini Ciampoli, L., Brancadoro, M.G., Tosti, F.

- **Int. Conf. on the Bearing Capacity of Roads, Railways and Airfields (BCRRA2017)**

Presentation: “Signal processing for optimisation of low-powered GPR data with application in transportation engineering (Roads and railways)”, 28-30 June 2017, Athens, Greece

Authors: Bianchini Ciampoli, L., D’Amico, F., Calvi, A., Benedetto F., Tosti, F.

- **European Geosciences Union General Assembly (EGU2017)**

Presentation: “Empirical prediction of mechanical properties of flexible pavement through GPR”, 24-27 April 2017, Vienna, Austria.

Authors: Bianchini Ciampoli, L., Benedetto, A.

- **AIIT Int. Congress on Transport Infrastructure and Systems (TIS2017)**

Presentation: “Efficient practices in railway ballast maintenance and quality assessment using gpr”, 10-12 April 2017, Rome, Italy

Authors: Bianchini Ciampoli, L., Calvi, A., Benedetto, A., Tosti, F., Alani, A.M.

## **ENVIRONMENTAL SUSTAINABILITY DESIGN OF SS1 AURELIA**

**Commissioner:** Comitato Maremma Viva

Technical Consultant for the development of a preliminary project for the renewal of SS1 Aurelia highway in the area of Capalbio, with specific reference to the optimization of environmental and landscape impacts. 2021

## **NON-INVASIVE INSPECTION OF AUTODROME PAVEMENT**

**Commissioner:** A.C.I. Vallelunga

Technical Consultant for the acquisition, processing and interpretation of GPR data collected on Vallelunga Autodrome pavement following to water leakages occurred in the deeper layers. 2019

## **REVIEW OF THE MAINTENANCE DELAY IN ITALIAN ROAD ASSET**

**Commissioner:** Fondazione Filippo Caracciolo

Technical Consultant for the report of the maintenance and rehabilitation needs for the secondary road asset in the national scenario. 2018

## **INTEGRATED ASSESSMENT OF AIRPORT APRON SERVICEABILITY**

**Commissioner:** Aeroporto di Bologna S.p.A.

Technical Consultant for the inspection of an airport apron area subject to early cracking phenomena. The inspection involved the use of both electromagnetic and deflectometric equipment. 2018

## **NON-INVASIVE ASSESSMENT OF AIRPORT RUNWAY**

**Commissioner:** Aeroporto di Bologna S.p.A.

Technical Consultant for the inspection of an airport runway pavement undergoing severe rutting processes. The analysis was conducted through GPR tests calibrated by means of coring. 2018

## **INDUSTRIAL PAVEMENT DESIGN**

**Commissioner:** Idroesse Engineering S.r.l.

Technical Consultant for the design, modeling and performance check of rigid pavement in industrial dock area within the Chioggia harbour. 2017

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### **AWARDS**   ▪ **BEST PAPER AWARD**

IEEE Asia-Pacific Conference on Geoscience, Electronics, and Remote Sensing Technology (AGERS 2021)

Paper: Tosti, F., Gagliardi, V., Bianchini Ciampoli, L., Benedetto, A., Threader, S., Alani, A.M., Integration of remote sensing and ground-based non-destructive methods in transport infrastructure monitoring: advances, challenges and perspectives, 29-30 September 2021, Virtual event.

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▪ **OUTSTANDING STUDENT POSTER AND PICO (OSPP) AWARD**

European Geosciences Union General Assembly (EGU2017)

Paper: Bianchini Ciampoli, L., Benedetto, A., Empirical prediction of mechanical properties of flexible pavement through GPR, 24-27 April 2017, Vienna, Austria.

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**MEMBERSHIPS**

- American Society of Civil Engineers (ASCE)
- European Geosciences Union (EGU)
- COST Action TU1208 “Civil Engineering Application of GPR” (to 2017)
- International Society for Optics and Photonics
- Società Italiana delle Infrastrutture Viarie (SIV)
- Professional Board of Engineers, Rome

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**LANGUAGES**

ITALIAN (NATIVE)  
ENGLISH (FLUENT)

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*To the present Curriculum Vitae is attached the complete list of publications authored by the candidate (see file “A2\_List of Publications.pdf”).*

Rome, 17.03.2022

LUCA BIANCHINI CIAMPOLI