FILIPPO DIARA

Research Technologist   Archaeologist   Ph.D. Geomatics

PERSONAL INFORMATION

Date of birth:
30/10/1988

LinkedIn:
linkedin.com/in/filippo-diara-110513174

Main email:
filippo.diara@unito.it

ORCHID:
0000-0002-7491-7079

Nationality:
Italian

Web site:
https://filippodiara.github.io

PEC (certified email address):
filippodiara@pec.it

SCOPUS ID:
57202444524

EDUCATIONAL PATH

2020   **Ph.D. in Architectural and Landscape Heritage** (ICAR/06 – Topography and Cartography). Politecnico di Torino, DAD department. Supervisors: Prof. Fulvio Rinaudo and Silvia Beltramo, Thesis Title: *Experimental workflow for the creation of a non-conventional open source HBIM platform integrating metric data and stratigraphic analysis: the case study of the refectory of Santa Maria di Staffarda Abbey.* Torino, 22-04-2020. Rating with Excellence and Honour.

2016   **Archaeological Heritage Specialization School diploma.** Mark 110/110 with Honour. University of Florence. Mentor Prof. Guido Vannini – supervisor Chiara Molducci. Florence, 14-09-2016. Thesis title: *Il Casentino nell'Altomedioevo. Una lettura archeologica del territorio attraverso le tracce materiali scultoree* (Casentino in Early Middle Ages. Archaeological analysis from sculpture evidences).

2013   **Master's degree in Archaeology and Historic Sciences.** Mark 110/110 with Honour. University of Siena. Mentor Prof. Roberto Parenti – supervisor Andrea Arrighetti. Siena, 09-04-2013. Thesis title: *Il rilievo 3D con fotocamera digitale. La nuova fotogrammetria* (3D survey with digital camera. The new photogrammetry).

2010   **Bachelor's degree in Archaeological Sciences.** Mark 108/110. University of Siena. Mentor prof. Emanuele Papi. Siena, on 16-12-2010. Thesis title: I siti rurali del Mauretania Tingitana. Sintesi degli studi e proposta di una base cartografica (Archaeological rural sites in Mauretania Tingitana. Studies summary and cartographic basis proposal).

PROFESSIONAL EXPERIENCES

RESEARCHER: projects and collaborations

2023~2025   **ITSERR Resilience project:** Research Technologist at University of Turin, Historic Studies Department. Activities: 3D documentation and analysis of archaeological evidences related to cuneiform clay tablets, seals, sealings of Western Asia. WP9 "Taurus" member of ITSERR Resilience project. Info: https://www.resilience-ri.eu/related-projects/

2021~2023   **Frinco Castle**: Research project referred to the architectural requalification of the Frinco Castle (AT). Politecnico di Torino, DAD department. Supervisor of the project Prof. Marco Roggero. Research activities: drafting of graphic design and 3D modelling of the of the Frinco Castle; Stratigraphic analysis and interpretation of the historic evolution of the construction site. Further collaboration with Arch. Marco Maccagno (https://www.studiomaccagno.it/) for 3D modelling and rendering of the proposed solution for the Frinco Castle reconstruction.

2022   **Stupinigi and Venaria Reale**: Collaboration project with La Venaria Reale and Residenze Reali Sabaude (arch. Alessia Bellone and arch. Maurizio Reggi) for the requalification and restoration project of the historic garden of the Royal Hunting Palace of Stupinigi (Palazzina di Caccia di Stupinigi – Torino, TO). From January to March 2022. Activities: drafting of graphic design (project' boards) and 3D modelling and rendering of the proposed solution of the garden (Rhinoceros and V-Ray). Further info: maurizio.reggi@lavenariareale.it; https://lavenaria.it/

| 2021 | **Parco Archeologico del Colosseo**: Collaboration project with Parco Archeologico del Colosseo (Michela Sediari) for the analysis and digital restitution of the Giacomo Boni Museum on the Via Sacra (Roman Forum, Italy). The digital representation is based on the HBIM design of the building and the related publication through cloud CDE solutions.

Domus Regia project: Cooperation with Paolo Carafa and Fabio Cavallero (Sapienza University of Rome) for the HBIM design and data exchange related to *the Domus Regia – Sacraria Martis et Opis* (Roman Forum, Italy).

ARK-BIM web HBIM platform: Post-Doc Research project based on the definition of operational procedures for the implementation of HBIM for Cultural Heritage on Open Source platforms. Development of ad-hoc and FOSS solutions for the online data dissemination of HBIM projects for archaeology. Creation of ARK- BIM custom cloud HBIM platform for archaeology (https://ark-bim.github.io)

ERAMCA: Member of Work Package 4 and Management assistant of the ERASMUS+ project ERAMCA (Environmental risk assessment and mitigation on Cultural Heritage assets in Central Asia). Coordinator: F. Rinaudo. Activities: development of a digital library on theoretical contents of the Master in Cultural Heritage Conservation - Integration of the digital library with the material needed for practical courses. From January 2020 to December 2021. Staff position: technician; Organization of sharing data between partners to finalize tasks and deliverables; organization of the kick-off meeting; Assistance to the manager for administrative tasks, deliverables and reports.

2016~2020 **Ph.D Project** Ph.D project (from 2016 to 2020) based on stratigraphic analysis and HBIM restitution of the refectory of the Santa Maria Abbey of Staffarda (CN, Italy): Stratigraphic survey, total station, LiDAR and drones survey. Further collaboration with Silvia Beltramo for the stratigraphic analysis and interpretation of the refectory.

2014 & 2022 **Sticciano Brick Kiln**: 2014 > Collaboration with Roberto Parenti (University of Siena), Clara Nerucci (University of Florence) and Cultural Association CABA for the consolidation and requalification processes of the Sticciano Kiln (Sticciano, FI - Italy). Activities: photogrammetric survey and 3D model design; Short conference with intervention: "Come riqualificare una vecchia fornace da mattone" (How to regenerate an ancient brick kiln). 2022 > Collaboration with Arch. Alessandra Testori (www.28nero.it) for the historical and technical report on photogrammetric 3D survey occurred in 2014.

2013 **Camaldoli Monastery**: Collaboration with Andrea Pagano, Stefano Bertocci, Sandro Parrinello (University of Florence – Architecture Department) for the analysis and data exchange of the *Maldolo Cloister* inside the Camaldoli Monastery (Poppi, AR – Italy). Activities: Coordination of stratigraphic and photogrammetric survey of the cloister on behalf of Buildings Archaeology Laboratory of University of Siena.

TEACHING ASSISTANT

Politecnico di Torino, Architecture and Design Department (DAD). Teaching Assistant of the following courses:

2022/2023
- **Point Clouds and HBIM** – cod. 02VMLTE, Reference professor: Paolo Piumatti – (ENG course)
- **Nuvole di punti e HBIM** – cod. 02VMKTE, Reference professor: Elisabetta Caterina Giovannini – (ITA course)
- Use and management design of Cultural Sites - cod. 01VMTTE, Reference professor: Fulvio Rinaudo – (ENG course)

2021/2022
- **Atelier restauro e conservazione integrata A**. Architettura per la sostenibilità. (Restoration and integrated conservation. Architecture for sustainability) - cod. 01VNUPX, Reference professor: Marco Roggero and Carla Bartolozzi – (ITA course).
- **Geomatics Laboratory for architecture modelling** - cod. 01PRYLU, Reference professor: Fulvio Rinaudo – (ENG course).

2020/2021
- **Atelier Compatibilità e sostenibilità del restauro architettonico A**: Strumenti avanzati per la modellazione dell'architettura (Advanced techniques for architecture modelling - Compatibility and sustainability of architectural restoration Atelier) - cod. 01RWUQN, Reference professor: Marco Roggero and Carla Bartolozzi – (ITA course).
- **Laboratorio di Geomatica per la modellazione dell'architettura** (Geomatics Laboratory for architecture modelling) - cod. 01PRUPM – 01PRYLU, Reference professor: Marco Roggero – Fulvio Rinaudo (ITA and ENG course).

2019/2020 & 2018/2019
- GIS e modellazione per I Beni Culturali (GIS and 3D modelling for Cultural Heritage) – cod. 01QNBPV, Reference professor: Fulvio Rinaudo – (ITA course).

ARCHAEOLOGIST / SURVEYOR EXPERIENCES   from 2011

STRATIGRAPHIC AND METRIC SURVEYS

Frinco Castle: Stratigraphic survey and analysis of the Frinco Castle (Asti - Italy), 09-03-2022. Reference: prof. Marco Roggero, DAD department (architecture and design) Politecnico di Torino. Further info: marco.roggero@polito.it.

Venaria Reale: Total Station and LiDAR survey of a vaulted roof inside Venaria Reale Palace (Torino - Italy), 21 January 2020. G4CH Lab (Geomatics for Cultural Heritage) DAD department (architecture and design) Politecnico di Torino. Further info: F. Rinaudo - fulvio.rinaudo@polito.it.

Staffarda Abbey: Stratigraphic survey, total station, LiDAR and drones survey of the Santa Maria Abbey of Staffarda (Cuneo - Italy), 24 July 2018. Stratigraphic analysis of the refectory. G4CH Lab (Geomatics for Cultural Heritage) DAD department (architecture and design) Politecnico di Torino. Further info: F. Rinaudo – fulvio.rinaudo@polito.it.

Gubbio Ducal Palace: Total Station, LiDAR and APR (drones) survey of the Ducal Palace in Gubbio (Italy) in 2017 and 2018. G4CH Lab (Geomatics for Cultural Heritage) DAD department (architecture and design) Politecnico di Torino. Further info: F. Rinaudo – fulvio.rinaudo@polito.it.

Bivignano Fortress: Stratigraphic and metrologic analysis of the Bivignano fortress (Arezzo - Italy) as a part of the collaboration with Alessandro Merlo, Andrea Aliperta, Gaia Lavoratti, Mattia Genuini (Università degli Studi di Firenze – Architecture Department) and Clara Nerucci (Università degli Studi di Firenze). June 2014.

Sticciano Kiln: Three times stratigraphic, photogrammetric and Total Station surveys of Sticciano kiln (Certaldo, FI). From June to September 2014. Collaboration with prof. Roberto Parente (UNISI) and CABA association.

Camaldoli Monastery: Coordination of stratigraphic and photogrammetric survey of Maldolo Cloister inside the Camaldoli Monastery (Poppi, AR). Stratigraphic analysis of the cloister. Buildings Archaeology Laboratory of University of Siena (LAArch). July 2013. Historic Science and Cultural Heritage Department – University of Siena.

ICT ERASMUS PROJECT: Participation to the ERASMUS Intensive Programme Project "ICT at the Service of Cultural Heritage" meeting on Rhodes (Greece). From 7-20 July 2013. Further information: http://www.researchgate.net/profile/Andreas_Georgopoulos. Survey of Kymisala archaeological site, organized by National Technical University of Athens (NTUA).

Buildings Archaeology Laboratory: Member of Buildings Archaeology Laboratory of University of Siena (LAArch) from 2011 to 2014, coordinated from prof. Roberto Parenti (UNISI); Historic Science and Cultural Heritage Department – University of Siena. General activities: Buildings Archaeology studies and research, stratigraphic surveys, archive research, photogrammetric surveys, post-processing data. Surveys: Stratigraphic and photogrammetric survey of San Cassiano di Controne church (Bagni di Lucca, LU); San Lorenzo church in Corte di Brancoli (Bagni di Lucca, LU); Castiglion che Dio Sol Sa castle (Sovicille, SI).

SUPERVISOR AND SENIOR ARCHAEOLOGIST

Supervisor archaeologist of preventive archaeological actions of Berdia site (Scoglitti, Vittoria – RG; Italy). June 2016. The area has been subjected to an archaeological constraint as defined by the "Carta dei Beni Paesaggistici". Employers: Marcello Zago surveyor, Comiso (RG); Superintendence of Environmental and Cultural Heritage of Ragusa, Dr. Saverio Scerra, official executive archaeologist. Activities: Archaeological excavations organization and oversight; Stratigraphic analysis; Production of photographic and written documentation; Final report with building permission.

FIELD ARCHAEOLOGIST

Montaccianico Castle: Participation to archaeological excavations in 2015 and 2016 of Montaccianico Castle (Scarperia, FI) under direction of Prof. Guido Vannini and coordination of PhD Elisa Pruno and PhD Chiara Marcotulli from University of Florence (Medieval Archaeology Laboratory). Activities after excavation: creation of archaeological data and record database; cataloguing archaeological evidence; stratigraphic analysis and 3D modelling.

Vignale: Participation to archaeological excavations in 2008 and 2009 of Vignale archaeological site (Piombino, LI) under direction of Prof. Enrico Zanini from University of Siena. Historic Science and Cultural Heritage Department, University of Siena.
Activities after excavation: drawing courses of ancient pottery; creation of archaeological data and record database; cataloguing archaeological evidence.

LANGUAGES

Native language	Italian	
Other languages	English	I.E.L.T.S. English Certification: 5.5 (B2 Level) – P.E.T. Certification: PASS

SPEAKER AT CONFERENCES and LECTURER   from 2013

3D ARCH 2024 – Speaker at the 10th International ISPRS / CIPA Workshop "3D Virtual Reconstruction and Visualization of Complex Architectures", 21-23 February 2024, Siena, Italy

ArcheoFOSS 2024 – Speaker at ArcheoFOSS 2024 International Conference. Talk and paper presented: "Data extraction from 3D scanning: post-processing filtering for analytic and informative 3D models of small archaeological finds" University of Turin, 12-13 December 2023, Turin.

IM/MATERIALITIES – Speaker at IM/MATERIALITIES, Museum between real and digital. International Conference. Talk and paper presented: "Reveling the unperceived: 3D scanning and post-processing analysis of Cuneiform Tablets for philological and historical purposes" From 28th November to 1st December 2023, Museo Egizio - Turin.

Scan-to-BIM – Invited lecturer for the professional course: Scan-to-BIM. Course organized by SIFET (Italian Society of Photogrammetry and Topography) for professional figures (surveyors). Lecture held on 07-03-2023, Politecnico di Torino. SIFET Piemonte – www.sifet.org; https://www.geometri.verbania.it/news.asp?id=1098

3D modelling for Archaeological and Architectural Heritage - Invited speaker at the conference "3D modelling for Archaeological and Architectural Heritage" organized by Rotary Club Comiso (Elena Bocchetti president) - district 2110 (Sicily and Malta). Comiso, 04-01-2023.

3D modelling and HBIM – Lecturer for the master Course: Atelier di Restauro e conservazione integrate A (Restoration and conservation Atelier), Politecnico di Torino. Lecture on "3D modelling and HBIM" held on 03-05-2022. Academic year 2021/2022, course code 01VNUPX. Reference professor: Marco Roggero and Carla Bartolozzi (DAD department).

Stratigraphic analysis for Buildings Archaeology – Lecturer for the master Course: Atelier di Restauro e conservazione integrate A (Restoration and conservation Atelier), Politecnico di Torino. Lecture on "Stratigraphic analysis for Building Archaeology" held on 27-04-2022. Academic year 2021/2022, course code 01VNUPX. Reference professor: Marco Roggero and Carla Bartolozzi (DAD department).

HBIM for Archaeology – Invited lecturer for the Course: Scan 2 HBIM (historical/heritage building information modeling). Lecture on "HBIM for Archaeology" held on 09-09-2021. Course of the Doctoral programme: Architectural and landscape Heritage, Politecnico di Torino. Academic year 2020/2021, course code 01TRYRL. Reference professor: Filiberto Chiabrando (DAD department).

Where knowledge is created: Speaker at the conference "Where knowledge is created. Places of research, exchange and learning in ancient studies" Deutsches Archäologisches Institut. 24 and 25 November 2021, Rome (Italy) Hybrid event. Paper and talk presented with Michela Sediari: *The forgotten Museum. The Giacomo Boni Museum on the Via Sacra (Roman Forum) between knowledge processes and HBIM documentation.*

Il Restauro nell'era dell' H-BIM: Poster speaker at the conference "Il Restauro nell'era dell' H-BIM (Restoration in H-BIM era)" Conference organized by Rotary Club Roma in collaboration with Sapienza University of Rome, 16 November 2021, Rome (Italy). Award cerimony for the winner of the contest for best Ph.D project on HBIM and restoration. 1° prize winner for the best Ph.D thesis on HBIM.

28th CIPA International Symposium: Speaker at the 28th CIPA International Symposium: "Great Learning & Digital Emotion", Beijing, Cina, 28 August – 1 September 2021. Hybrid Event. Paper and talk presented: *From excavation data to HBIM environment and cloud sharing: the case study of Domus Regia, Sacraria Martis et Opis (Roman Forum, Rome - Italy).*

AUTeC Seminaries Series: Speaker at lectures series of AUTeC (Associazione Universitari di Topografia e Cartografia) related to AUTeC award 2019 (best Geomatics PhD thesis). 7 and 21 May 2021, Virtual events. Talk: *Experimental workflow for the creation of a non-conventional open source HBIM platform integrating metric data and stratigraphic analysis: the case study of the refectory of Santa Maria di Staffarda Abbey*

Arqueológica and GEORES: Speaker at the ARQUEOLÓGICA 2.0 - 9th International Congress & 3rd GEORES - Digital Twins for Advanced Cultural Heritage Semantic Digitization. 26-28 April 2021, Valencia, Spain (Virtual Event). Paper and talk presented: *Cloud data sharing and exchange of HBIM projects for archaeology: possible solutions and proposals.*

III Settimana del Patrimonio: Speaker at the III Settimana del Patrimonio. Lectures series related to the Ph.D programme Architectural and Landscape Heritage at Politecnico di Torino. Virtual Event. 22-26 March 2021. Talk: *Experimental workflow for the creation of a non-conventional open source HBIM platform integrating metric data and stratigraphic analysis: the case study of the refectory of Santa Maria di Staffarda Abbey* (PhD Thesis).

ArcheoFOSS 2020: Speaker at the XIV ArcheoFOSS International conference - Open software, hardware, processes, data and formats in archaeological research; 15-16-17 October 2020. Paper and talk presented: *Towards FreeCAD experimentations and validation as a FOSS HBIM platform for building archaeology purposes.*

XXIV ISPRS Congress: Speaker at the XXIV ISPRS Congress (Nice), Virtual event of the 2020 presentations; 31 August – 2 September 2020. Paper and talk presented: *Building Archaeology documentation and analysis through open source HBIM solutions via NURBS modelling.*

27th CIPA International Symposium: Speaker at the 27th CIPA International Symposium: Documenting the past for a better future, Avila, Spain, 1-5 Sep. 2019. Paper and talk presented: *From reality to parametric models of Cultural Heritage assets for HBIM.*

GEORES 2019: Speaker at the 2nd International Conference of Geomatics and Restoration on "Cultural Heritage: challenges, new perspectives and technology innovation. Towards informative content models and beyond" – Politecnico di Milano, 8-10 May 2019. Paper and talk presented: *Evaluation of an integrative approach between HBIM and architecture history.*

ISPRS TC II Mid-term Symposium: Speaker at ISPRS TC II Mid-term Symposium "Towards Photogrammetry 2020", 4–7 June 2018, Riva del Garda, Italy. Paper and poster presented: *Open source HBIM for Cultural Heritage: A project proposal.*

IV Ciclo di Studi Medievali: Speaker at the IV Ciclo di Studi Medievali, Firenze 4-5 Giugno 2018, ex Convento Il Fuligno, via Faenza 48n. Paper and talk presented: *Gli arredi liturgici lapidei altomedievali: committenti e maestranze nel Casentino tra VII-X secolo.*

CHNT XXII: Speaker at the XXII International "Conference on Cultural Heritage and New Technologies (CHNT)" Wien (Austria) 8-11 November 2017, paper and talk presented: *Conservation analysis using photogrammetric post processing techniques: the example of early medieval low relief in SS. Assunta e S. Bartolomeo church in Badia Prataglia, Tuscany.*

DCH 2017: Speaker at DCH2017 Digital Cultural Heritage International Conference, Berlin, Staatsbibliothek Berlin – August 30- September 01, 2017. Paper and talk presented: *Cultural Heritage digital data: future and ethics.*

La fornace e la civetta 2014: Speaker at the convention "La fornace e la civetta 2014" meeting on 18 October 2014 in Sticciano (Certaldo, FI), with Roberto Parenti (UniSI), Clara Nerucci (UniFI) and cultural association CABA. Intervention title: "Come riqualificare una vecchia fornace da mattone" (How to regenerate an ancient brick kiln). Info: www.associazioneculturalecaba.com.

CHNT XVIII: Speaker at the XVIII International Convention "Conference on Cultural Heritage and New Technologies (CHNT)" meeting on Vienna (Austria) from 11 to 13 November 2013, with scientific publication: "New software and technologies applied to documentation and communication of Cultural Heritage". Participation to poster session under *New technologies* category.

XXIX Convention of Studies of Brixen: Speaker at the poster session on the XXIX Convention of Studies of Brixen, "Conservazione e valorizzazione dei siti archeologici. Approcci scientifici e problemi di metodo", on 9-12 july 2013. Info: http://www.arcadiaricerche.it/editoria/2013.htm

Study day on State Archive of Florence: Invited Speaker at the study day on State Archive of Florence: "Archeologia dell'Architettura, le tecniche di rilievo speditivo" on 13-02-2013, on the orders of Regional Director Isabella Lapi and Regional Direction for Cultural and Landscape Tuscan Heritage.

PRIZES AND AWARDS

1° place - Premio Concorso "Il Restauro nell'era dell'H-BIM" 2021 / Winner of the Contest "Restoration in the H-BIM era" 2021. Premio miglior progetto di tesi di dottorato riguardante il restauro nell'era dell'H-BIM. Best Ph.D project related to Restoration and H-BIM. Organized by Rotary Club Roma, distretto 2080 in collaboration with Sapienza University of Rome and Association of Architects of Rome. Info: https://www.rotary2080.org/

1° place - Premio AUTeC 2019 / AUTeC award 2019. Premio tesi di dottorato (ICAR/06) – Associazione Universitari di Topografia e Cartografia. Ph.D thesis award – University Association of Topography and Cartography. Info: http://www.autec-geomatica.it/news.html

1° place - Premio qualità 2019 / Quality award 2019 - Politecnico di Torino, Dipartimento di Architettura e Design - Dottorato in Beni Architettonici e Paesaggistici 32° ciclo (Ph.D in Architectural and Landscape Heritage). Best PhD Candidate of 32° course. Info: http://dottorato.polito.it/

MEMBERSHIP, LICENCES and MISC.

- ARK-BIM creator and developer (http://ark-bim.github.io)
- ISPRS Individual Member - (International Society of Photogrammetry and Remote Sensing).
- CIPA Regular Member - (Comité International de la Photogrammétrie Architecturale).
- G4CH Lab external member (Politecnico di Torino – DAD department).
- SAMI member (Società Archeologi Medievisti Italiani / Italian Society of Medievalists Archaeologists)- from 2018 to 2021 – card n°670.
- Volunteer for National Civil Service (Servizio Civile Nazionale) - Medical and Biological Library of University of Siena (ITALY), from 2014 to 2015.
- Driving licence B

PUBLICATIONS

DIARA F., "Data extraction from 3D scanning: post-processing filtering for analytic and informative 3D models of small archaeological finds". Proceedings of ArcheoFOSS, International Conference on Open software, hardware, processes, data and formats in archaeological research. University of Turin, 12-13 December 2023. Archeologia e Calcolatori. [in progress]

DE MARTINO S., **DIARA F.,** " Reveling the unperceived: 3D scanning and post-processing analysis of Cuneiform Tablets for philological and historical purposes". Proceedings of IM/MATERIALITIES, Museum between real and digital - International Conference 2023, Museo Egizio Press. [in progress]

DIARA F., SEDIARI M., SANTAMARIA U., "The forgotten Museum. The Giacomo Boni Museum on the Via Sacra (Roman Forum) between knowledge processes and HBIM documentation". Proceedings of the Conference "Where knowledge is created. Places of research, exchange and learning in archaeology and classical studies". 24-25 November 2021. DAI Deutsches Archäologisches Institut –German Archaeological Institute. [in progress]

ROGGERO M., **DIARA F.,** "Multi-sensor 3D survey: aerial and terrestrial data fusion, 3D modelling applied to a complex historic architecture at risk", In: Drones, Special Issue: Digital Twins and Extended Reality: Opportunities and Challenges of Integrated Applications, 2024, 2024, 8(4), 162; MDPI, https://doi.org/10.3390/drones8040162

TEPPATI LOSE' L., CHIABRANDO F., **DIARA F.,** SPADARO A., "From 3D metric survey to HBIM model. Testing of different Scan2BIM approaches for the archaeological documentation". Int. Arch. Photogramm. Remote Sens. Spatial Inf. Sci., XLVIII-2/W4-2024, 437–444, https://doi.org/10.5194/isprs-archives-XLVIII-2-W4-2024-437-2024, 2024.

DIARA F., ROGGERO M., "The Frinco Castle: from integrated survey to 3D modelling and stratigraphic analysis for helping knowledge and reconstruction". In: Remote Sensing, Special Issue: Applications of Laser Scanning and Photogrammetry in Civil Engineering and Architecture: Beyond 3D Modeling II, 2023, 15(19), 4874, ISSN 2072-4292 - MDPI - https://doi.org/10.3390/rs15194874

DIARA F. "Structured-light scanning and metrological analysis for archaeology: quality assessment of Artec 3D solutions for cuneiform tablets". In: Heritage, Special Issue: Non-invasive Technologies Applied in Cultural Heritage, 2023, 6(9), ISSN 6016-6034 – MDPI – https://doi.org/10.3390/heritage6090317

DIARA F., DIARA L., "Il Castello dei Naselli d'Aragona di Comiso". In: Castelli di Sicilia e Malta (by Valerio Cimino). December 2022 - Rotary Club District 2110 – "Salvatore Sciascia" Foundation, 198-199, ISBN: 9788882435523

DIARA F., "HBIM open source: a review". In: ISPRS International Journal of Geo-Information, Special Issue: Heritage Building Information Modeling: Theory and Applications, 2022, 11(9), 472. MDPI. https://doi.org/10.3390/ijgi11090472.

DIARA F., ROGGERO M., "Quality assessment of DJI Zenmuse L1 and P1 LiDAR and photogrammetric systems: metric and statistics analysis with the integration of Trimble SX10 data", In: Geomatics, Special Issue: Advanced Geomatic Techniques for the Built Heritage: Data Processing, Interpretation and Knowledge Management, 2022, 2(3), 254-281. MDPI. https://doi.org/10.3390/geomatics2030015.

DIARA F., RINAUDO F., "Towards FreeCAD experimentations and validation as a FOS HBIM platform for building archaeology purposes". Proceedings of ArcheoFOSS XIV International Conference 2020, ArcheoPress 2021, 55-67, eBook Open Access, 2021, ISBN 9781803271248

DIARA F., RINAUDO F., "ARK-BIM: open-source cloud HBIM platform for archaeology". In: Applied Sciences, Special Issue: 3D Virtual Reconstruction for Archaeological Sites, 2021, 11(18), 8770 - MDPI. https://doi.org/10.3390/app11188770.

DIARA F., CAVALLERO F., "From excavation data to HBIM environment and cloud sharing: the case study of Domus Regia, Sacraria Martis et Opis (Roman Forum, Rome - Italy)". The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. XLVI-M-1-2021, 207–213, https://doi.org/10.5194/isprs-archives-XLVI-M-1-2021-207-2021, 2021.

MURPHY M., MEEGAN E., KEENAGHAN G., CHENAUX A., CORNS A., FAI S., CHOW L., ZHENG Y., DORE C., SCANDURRA S., TIERNEY A., **DIARA F.,** RINAUDO F., Prizeman O., "Shape Grammar Libraries of Architectural Elements for Historic BIM". The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences. XLVI-M-1-2021, 479–486, https://doi.org/10.5194/isprs-archives-XLVI-M-1-2021-479-2021, 2021.

DIARA F., RINAUDO F., "Cloud data sharing and exchange of HBIM projects for archaeology: possible solutions and proposals". Proceedings of ARQUEOLÓGICA 2.0 - 9th International Congress & 3rd GEORES - GEOmatics and pREServation, 2021, Digital Twins for Advanced Cultural Heritage Semantic Digitization - Editorial Universitat Politècnica de València, pp. 491-494, ISBN: 978-84-9048-872-0.

DIARA F., RINAUDO F., "IFC classification for FOSS HBIM: open issues and a schema proposal for Cultural Heritage assets" Applied Sciences, Special Issue: BIM and HBIM: Principles, Applications, and Standardization/Interoperability Issues, 2020, 10(23), 8320, MDPI. ISSN 2076-3417. https://doi.org/10.3390/app10238320.

DIARA F., RINAUDO F., "Building Archaeology documentation and analysis through open source HBIM solutions via NURBS modelling" The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLIII-B2, 2020, pp. 1381–1388. Related to the XXIV ISPRS Congress (Nice), Virtual event of the 2020. https://doi.org/10.5194/isprs-archives-XLIII-B2-2020-1381-2020

DIARA F. [Ph.D Thesis]: "Experimental workflow for the creation of a non-conventional open source HBIM platform integrating metric data and stratigraphic analysis: the case study of the refectory of Santa Maria di Staffarda Abbey" - Politecnico di Torino, Dipartimento di Architettura e Design. Published on April 22, 2020.

DIARA F. "Cultural Heritage digital data: future and ethics". In: Digital Cultural Heritage (Springer), pp. 303-314. Related to the Conference on Digital Cultural Heritage (DCH17). Berlin 2017. ISBN: 978-3-030-15200-0 (First online 22 June 2019).

DIARA F., RINAUDO F., "From reality to parametric models of Cultural Heritage assets for HBIM" The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-2, 2019, pp. 413-419. 27th CIPA International Symposium: Documenting the past for a better future, Avila, Spain, 1-5 Sep. 2019. https://doi.org/10.5194/isprs-archives-XLII-2-W15-413-2019

DIARA F., BELTRAMO S., RINAUDO F., "Evaluation of an integrative approach between HBIM and architecture history", The international archives of the photogrammetry, remote sensing and spatial information sciences, XLII-2/W11, 225-229, 2019. Related to the Geores 2019, Politecnico di Milano. https://doi.org/10.5194/isprs-archives-XLII-2-W11-225-2019

DIARA F. "Conservation analysis using photogrammetric post processing techniques: the example of Early Medieval low relief in SS. Assunta e S. Bartolomeo Church in Badia Prataglia, Tuscany". Proceedings of the Conference on Cultural Heritage and New Technologies (CHNT22, 2017). Vienna 2019. ISBN 978-3-200-06160-6

DIARA F., RINAUDO F., "Open source HBIM for Cultural Heritage: A project proposal" The International Archives of the Photogrammetry, Remote Sensing and Spatial Information Sciences, Volume XLII-2, 2018. Related to the ISPRS TC II Mid-term Symposium "Towards Photogrammetry 2020", pp. 303-309, 4–7 June 2018, Riva del Garda, Italy. https://doi.org/10.5194/isprs-archives-XLII-2-303-2018

DIARA F. "Gli arredi liturgici lapidei altomedievali: committenti e maestranze nel Casentino tra VII-X secolo". Proceedings of IV Ciclo di Studi Medievali, pp. 519-527, Firenze 4-5 Giugno 2018, EBS Print, Monza 2018, ISBN: 9788893493710

DIARA F. "New software and technologies applied to documentation and communication of Cultural Heritage". Conference on Cultural Heritage and New Technologies (CHNT18, 2013)" Vienna 2014. ISBN 978-3-200-03676-5

DIARA F. "Sperimentazioni di nuove tecniche fotogrammetriche di medio e basso costo applicate all'Archeologia dell'Architettura", in "Conservazione e valorizzazione dei siti archeologici. Approcci scientifici e problemi di metodo". XXIX Convention of Studies of Brixen/Bressanone, 9-12 july 2013, Arcadia Ricerche Editions, pp. 585-594; ISBN 978-88-95409-17-7

DIARA F. "Nuove tecniche fotografiche per la rappresentazione dei Beni Culturali, Archeologia dell'Architettura, Le tecniche di rilievo speditivo" lecture teaching on State Archive of Florence on 13-02-2013 (info: sabap-fi@beniculturali.it)

SHORT NOVELS

DIARA F. "Progetto Atlas". In: *Res Publica Ex Machina. Scritti meta-scientifici* (a cura di Marchis V., Pozzi M.). Mimesis Editore, 2021, pp. 69-75, ISBN 978-8857584935

DIARA F. "Phobos". In: *Atlante degli incontri con la macchina* (a cura di Marchis V., Pozzi M.). Mimesis Editore, 2020, pp.67-79 - ISBN 978-8857569970

DIARA F. "La macchina dei sogni". In: *Incontri con la macchina. Scritti meta-scientifici* (a cura di Marchis V., Pozzi M.). Mimesis Editore, 2018, pp.69-80 – ISBN 978-8857550893

PERSONAL DATA

I hereby authorize the use of my personal details solely for circulation within the company according to the Italian Legislative Decree n° 196/2003. **I the undersigned Diara Filippo** conscious of expected criminal liability, from Italian law 76 del D.P.R. 445/2000, for the untruth hypothesis in false statements here indicated, **declare that what I described in this curriculum vitae it is true**.

Certifications of all described activities are available.

Turin,
19/04/2024