Safa'a Joudeh

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EDUCATION

International Summer School | Pompeii Sustainable Preservation Project |
Education Fraunhofer Institute for Building Physics IBP   **Aug – Oct 2023**
M.Sc. Structural Analysis of monuments and Historic construction (SAHC) |
University, Prague, Czech Republic   **Sep 2022 – Aug 2023**
Project Management of For Development (PMD Pro) |
Foundation Examination Project Management for Development Professionals.   **Dec 2021**
The Post-Conflict Recovery of Cultural Heritage | Technical University of Berlin.   **Mar 2019 – Jan 2020**
B.Sc. Architecture Engineering | Hashemite University, Jordan   **Sep 2013 – Jun 2018**

SKILLS

- **Technical:** AutoCAD Architecture, Rhino, Revit, ArcGIS, QGIS, DIANA FEA, Dlubal RFEM 6, Agisoft Metashape pro, 3Ds Max, FARO as-Built, CloudCompare, Adobe photoshop, Adobe Illustrator, Microsoft Suite.
- **Communicative:** Technical report writing and public speaking.
- **Interpersonal:** Creative, Collaborative, Enthusiastic, self-motivated, reliable, resilient, adaptable, problem-solving.

EXPERIENCE

Site/ Consultation Engineer | MAS Design Studio, Amman   **Aug 2023 – Now**

Project Title: *Tree of Al Buqayawiyya Mosque, Al-Safawii, Jordan*
Portfolio: MAS design studio (@mas_office)
- Managed and oversaw the planning, design, and construction phases of projects, ensuring adherence to budget, quality, and timeline requirements.
- Coordinated with clients, architects, and contractors to develop project specifications and ensure client satisfaction.
- Utilized AutoCAD and project management software to create detailed construction plans, blueprints, and schedules.
- Performed regular on-site inspections, quality control checks, and safety assessments to identify and resolve issues promptly.

Photogrammetrist | Katholische Universität Eichstätt – Ingolstadt   **Aug 2022 – Nov 2022**

Contract employment | Project Title: Bronze Workshop, Gerasa. Jordan
- Produced 3D photogrammetric documentation of archeological finds (Seven Ceramic Molds) and The Hand and Elbow of Heracles

Trainer | Conservation Engineer | Sela for Training and Protection of Heritage.   **Apr 2022 – Aug 2022**

Contract employment | Nongovernmental organization: *Hoosh Al-Rosann Rehabilitation, Turquoise Mountain, Irbid, Jordan*
- Designed and carried out the 8-week on-the-job training program in traditional construction techniques for two groups of 28 trainees from the host community in Umm Qais.
- Covered a variety of archaeological, architectural and heritage topics such as Building Surveying and Building Archaeology, Damage Mapping and Assessment, and Conservation and Restoration Planning.

Associate Architect | MAS Design Studio, Amman   **Nov 2020 – Feb 2022**

Portfolio: MAS design studio (@mas_office)
- Created and designed sustainable projects in Amman and Jordan using non-cement stones.
- Incorporated thick stone-bearing walls and various types of domes, including cross-domes and ordinary domes, to enhance the local and architectural character of the designs, following the architectural style of Hassan Fathy.

Conservation Architect | German Jordanian University, Madaba   **Feb 2019 – Jan 2022**

Project coordination | Nongovernmental organization | GIZ-C4WW Fund
Portfolio: Restoration of The Ancient Nabatean Flood Control System In Wadi Madras, At Petra by Safa Joudeh - Issuu
- Involved in complex technical, problem-solving and coordinated with internal and external partners of the project.
- Produced detailed architectural plans and designs, maps, project manuals and brochures.
- Generated 3D digital reconstruction models demonstrated the terrace system in Wadi Al-madras, based on the point cloud generated with a laser scanner and photogrammetric models.
- Designed the implementation project and prepared the shop drawing after performing the structural analyses of the system.
- Designed the M&E strategies and activities, conducted field investigations and oversaw the monitoring activities.
- Oversaw and supervised the reconstruction and rehabilitation activities and monitored the progress of the project.

Internship | ACOR - The American Center of Research   **Oct 2018 – Sept 2019**

Trainee | Nongovernmental organization | Project Title: Temple of Winged Lion Publication Project - TWLCRM, Petra.
- Assist TWLCRM Initiative Project Director and Publication Fellow gather and digitize materials for a future database.
- Created entry of the Temple's artifacts information into an Excel spreadsheet (including recording the material, object type, year, findspot, dimensions, and numbers), then processed the photographic documentation for those artifacts.

Photogrammetrist | German Jordanian University, Amman, Jordan   **Aug 2018 – Oct 2018**

Project Title: The Restoration and Public Display of The Roman Statues, Jerash.
Portfolio: Restoration of The Ancient Nabatean Flood Control System in Wadi Madras, At Petra by Safa Joudeh - Issuu
- Conduct 3D photogrammetric documentation of the nine restored statues that had been discovered during the excavation seasons 2016-2018 at the Eastern Baths of Jerash – before and after restoration.
- Assisted in the design process of the display of the statues in the museum's showrooms.
- Prepared 3D animation of all the restored statues to be presented at international conferences.

RESEARCH-BASED EXPERIENCE

M.Sc. Structural Analysis (SAHC) | Czech Technical University   **Apr – Aug 2023**

Thesis Title: Static Assessment of Judit Tower in Prague.
- Idealized the geometrical model in order to develop the Finite Element (FE) Models using Dlubal analysis software.
- Characterize its system, by utilizing the integration of dynamic identification results with 3D FE model assessments.
- Assessed the bearing capacity and the influence and causes of cracks in the masonry, taking into account its development over time and examining the state of its structural system in its current condition.

M.Sc. Structural Analysis (SAHC) | University of Minho   **Sep 2022 – Mar 2023**

Integrated project: The National Museum of Archaeology (NMA).
- Carried out the complete geometrical survey of the building using GPR and Photogrammetric application.
- Conducted NDT and MDT tests to assess the mechanical proprieties of the structure.
- Idealized the global structure's geometry and created the Finite Element Model, then calibrated its parameters based on dynamic measurements.

Researcher | The German Protestant Institute of Archaeology Amman – GPIA   **Jul 2021 – Dec 2022**

Project: *Rabbet Ammon in The Iron Age*
- Prepared Topographic site plans that demonstrate the Iron Age Sites' locations, Using QGIS and AutoCAD Architecture.
- Assessed the quality of 3D scans of the sculpture to generate 3D rendering of more than 35 sculptures.
- Conducted Architectural documentation and generated Georeferenced orthophotos of several Iron Age sites using the FARO as-Built AutoCAD Plug-in, based on the photogrammetry generated using Agisoft Metashape pro.

Researcher Assistance | Applied Science University in Jordan.   **Sep 2021 – Dec 2021**

Project: *Rethinking Cultural Heritage in High Education*
- Carried out the quantitative and qualitative research, preparing graphs and spreadsheets to portray results.
- Provided Arabic and English translations of English communication (Website, reports) content and reviewed print and online resources to gather information for the research project.

The Post-Conflict Recovery of Cultural Heritage | Technical University of Berlin.   **Mar 2019 – Jan 2020**

Project*: Architectural Documentation and Assessment of al-Quaysmeh Roman Mausoleum.*
- Created detailed georeferenced 3D model 2D orthophotos, by integrating the photogrammetric data and total station measurements.
- Software: AutoCAD, Faro as-Built and Agisoft Metashape Pro.
- Conduct thorough damage analysis of the structure.

PUBLICATIONS
- **The Nabatean Flood Control System of Wadi Hraimieh, Petra: Restoring and Learning from The Past, 2022**
- **Enriching Cultural Heritage User Experiences Through 3d Interpretive Models at Tefilla and Jerash, Jordan**
- **Conservation Of the Nabatean Flood Control System |** Under Review.

AFFILIATION
- **Jordanian Engineers Association, Since 2018.**
- **ICOMOS international council on monuments and sites, Since 2021.**