

## MEZGEEN RASOL, PH.D.

AID NDT/NDE Senior Engineer (Non-destructive Evaluation of Concrete in Road Transport Infrastructure)

Dr. Rasol has over 10 years of research and professional experience in the application of non-destructive evaluation, advanced data processing techniques to road transport; use of NDT technologies (e.g., ground penetrating radar (GPR), road-based sensors. As a full-time NDT/NDE Senior Engineer at Advanced Infrastructure Design, Inc. (AID), Rasol has gained research and professional experience in the use of other NDT technologies, including high-speed inertial profiler testing, high-resolution video collection, automated pavement distress collection using Laser Crack Measurement System (LCMS), Bridge Deck & Substructure evaluations and Forensic Investigations of concrete elements using GPR, Inspection of early cracks and corrosion investigation in rigid pavement.

**Development of a Decision Support System for increasing the Resilience of Road Infrastructure based on combined use of terrestrial and airborne sensors and advanced modelling tools - PANOPTIS project** funded by the European Union's Horizon 2020 research and innovation program, under grant agreement no. 769129. Launched in June 2018 and lasting four years, the project aims to create an integrated road infrastructure management tool for improved resilience and provide safe and reliable road transport infrastructures. Mezgeen was a working group leader and mostly working under the WP4 - Multi-hazard modeling, vulnerability, and impact assessment of road infrastructure with National Technical University of Athens (Greece), Aristotle University of Thessaloniki (Greece), ACCIONA Construcción S.A (Spain), Egnatia Odos AE, C4Controls Ltd (UK). The aim of the WP4 is to provide better understanding of the rebar corrosion intensity and rebar cross section loss in prestressed concrete bridge deck based on the integrated network of sensors for smart corrosion monitoring by using corrosion sensors (INESSCOM). Project website: ([www.panoptis.eu](http://www.panoptis.eu))

**Improved Robotic Platform to perform Maintenance and Upgrading Roadworks - HERON project** funded by the European Union Horizon 2020 research and innovation program, under grant agreement no. 955356 (Duration 4 years). Objective of the project to develop an integrated automated system to perform road maintenance and upgrading works, such as crack sealing, pothole sealing, asphalt rejuvenation. Mezgeen was R&D working group leader to investigate the robotic application for concrete investigation in rigid pavement and upgrading maintenance solutions. Project website: ([www.heron-h2020.eu/](http://www.heron-h2020.eu/))

**Garden State Parkway (GSP) Bridge Shoulders Study, NJ (2023):** Mezgeen was AID's NDT/NDE Senior Engineer who oversaw a non-destructive evaluation of composite shoulders for 8 bridges in NJ. Mezgeen has conducted Ground Penetrating Radar (GPR) testing and analyses of the data collected. The objectives of this non-destructive investigation were to determine the pavement thickness along slope and cross slope of the roadway, detect the presence of any anomalies within or behind the pavement using Laser Crack Measurement System (LCMS).

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## MEZGEEN RASOL, PH.D.

### Firm

Advanced Infrastructure Design, Inc.

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### Education

Postdoctoral. Civil and Transportation Engineering, Gustave Eiffel University France, 2023

Ph.D. Civil Engineering, Polytechnic University of Catalonia, Spain, 2021

M.S. Civil Engineering, Eastern Mediterranean University (EMU) Cyprus, 2014

B.S. Civil Engineering, University of Duhok, Kurdistan Region of Iraq, 2010

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### Professional Affiliations

Member – American Society of Civil Engineers (ASCE)

Member – American Concrete Institute (ACI)

Member – American Society of Material and Testing (ASTM)

Member – The International Union of Laboratories and Experts in Construction Materials, Systems and Structures (RILEM), Paris

Member – The International Federation for Structural Concrete (*fib*), Paris

Member – Kurdistan Engineering Union

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