Digital Twin Anomaly Detection Decision-Making for Bridge Management (DTADD)

Structural Engineering Research Group (SERG) Seminar 2022

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Funded by the European Union

Key Facts:

- Secondment at TU Delft (last 6 months).
- Relevant knowledge actors and end-users:

Statens vegvesen

Rijkswaterstaat
Ministerie van Infrastructuur en Waterstaat

DTADD

Grant agreement ID: 101066739

DOI

10.3030/101066739

Start date	**End date**
1 November 2022	31 October 2024

Funded under

Marie Skłodowska-Curie Actions (MSCA)

Total cost

No data

EU contribution

€ 226 751,04

Coordinated by

OSLOMET - STORBYUNIVERSITETET

Norway

Context:

- Bridges have great economic, social and cultural value.
- Many of them are in poor condition (recent collapse of several bridges).

Proposal:

- Bridge and structural engineering.
- Digital twins (DT).
- Anomaly detection algorithms (ADA).
- Reliability-based bridge management approach (RBBMA).
- Cultural heritage (CH) conservation.

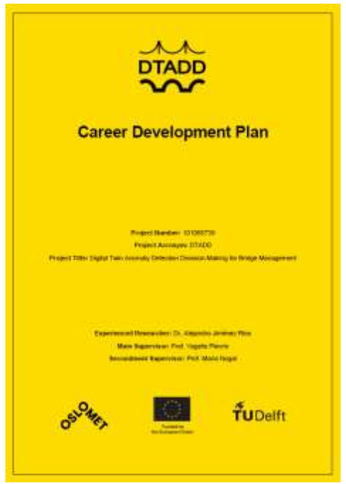
Research Objectives:

1. To build DT models of heritage/conventional bridges to assess and identify the highest performing ADA for damage and/or significant decay detection.

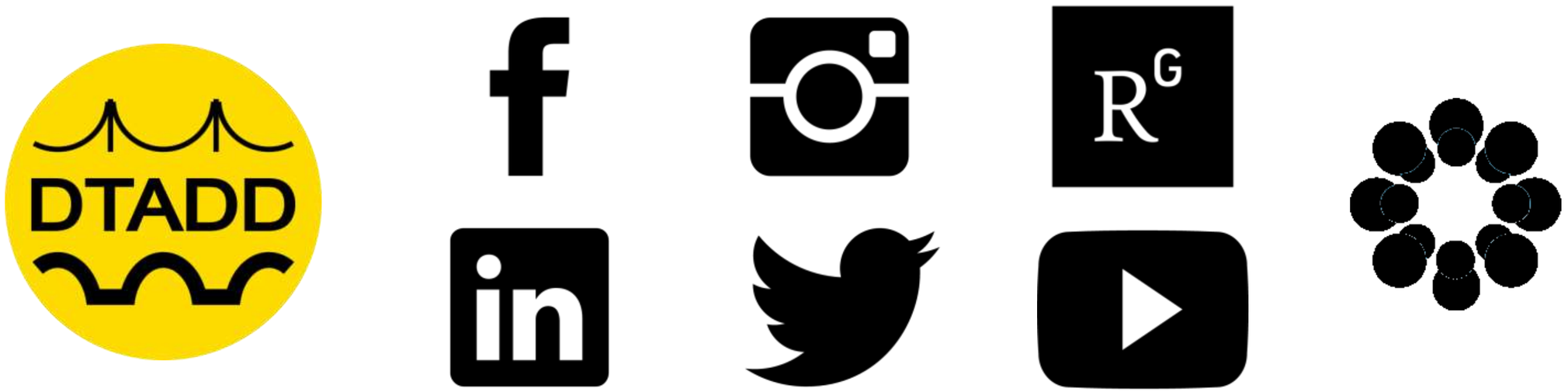
2. To develop an ADA-informed open-source decision-making tool based on a RBBMA, to assess the need for bridge intervention while explicitly considering the bridge's CH value.

Other Objectives:

- Help the experienced researcher to become a leading international expert on the conservation of bridges and to achieve his goal of becoming an independent researcher and obtaining a tenure track position.



Dissemination and Communication



Links:

- https://alejandoslomet.github.io/
- https://www.facebook.com/MSCA.DTADD
- https://www.instagram.com/msca_dtadd/?fbclid=IwAR3UEEqUl3cHrVvYcUaG1npCGDzgzBT3U5JJ2D33t9O12la9Yw7Li84Ii1M
- https://twitter.com/MSCA_DTADD
- https://www.youtube.com/channel/UCCFfT_ggKhtvxVhwdXyYqEw
- https://www.linkedin.com/company/msca-dtadd/?viewAsMember=true
- https://www.researchgate.net/project/Digital-Twin-Anomaly-Detection-Decision-Making-DTADD-for-Bridge-Management
- https://osf.io/wfqrg/

DTADD

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THANK YOU!!!