

Research topics and projects

Maua Institute of Technology (IMT)



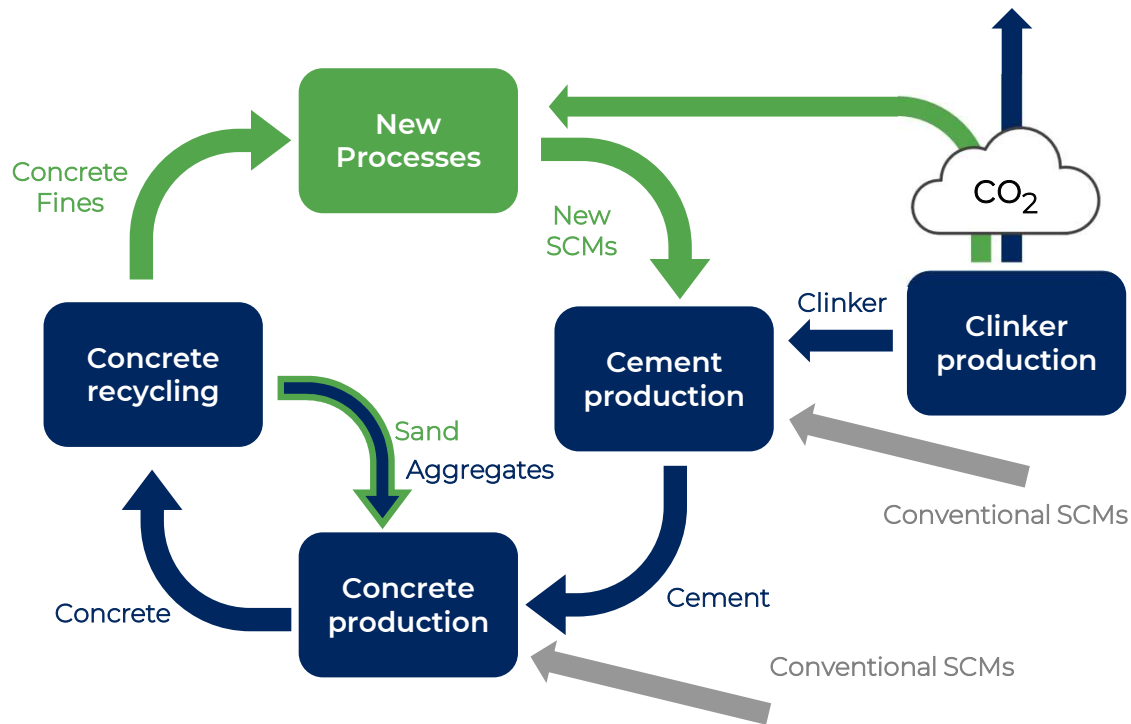


Fig. 1. Adapted from Skocek et al. (2020) - 10.1038/s41598-020-62503-z

Research objective:

New supplementary cementitious materials (SCMs) from concrete waste.

Researches:

Prof^a Dr^a Heloísa Cristina Fernandes Cordon
Prof. M.Sc. Mateus Zanovello

Published papers:

Strength-porosity correlation and environmental analysis of recycled Portland cement

Prof. M.Sc. Mateus Zanovello
(doi.org/10.1016/j.resconrec.2022.106763)

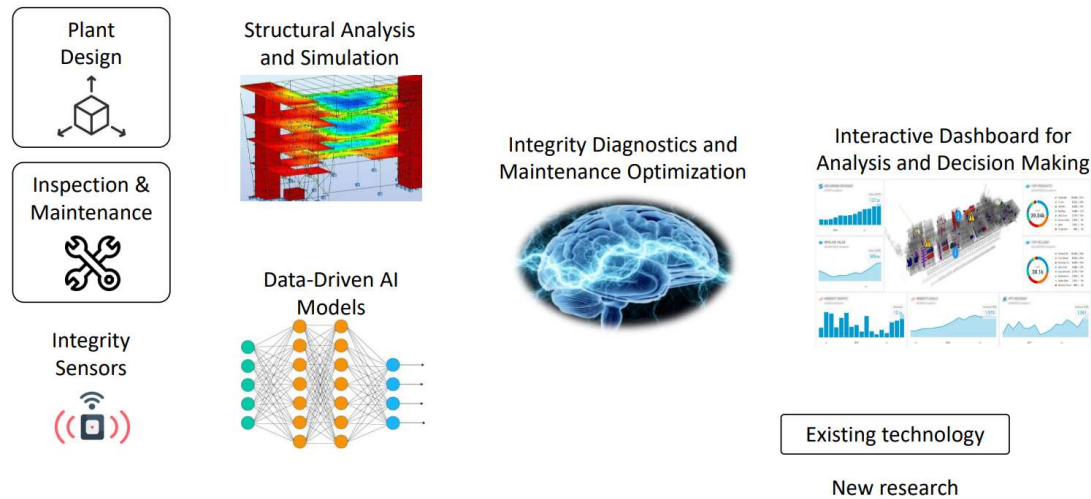
Upcoming publications:

Toward circularity of concrete via thermoactivation of recycled cement in an engineered binder

Prof. M.Sc. Mateus Zanovello



Engineering – Digital Twins



Research objective:

Implementation of Digital Twins to improve bridge management.

Researches:

Prof. Dr. Pedro Henrique Cerento de Lyra
Prof^a Me. Andressa Corrente Martins

Fig. 2. Flowchart of the development of a digital twin for bridges.



Engineering - Asphalts

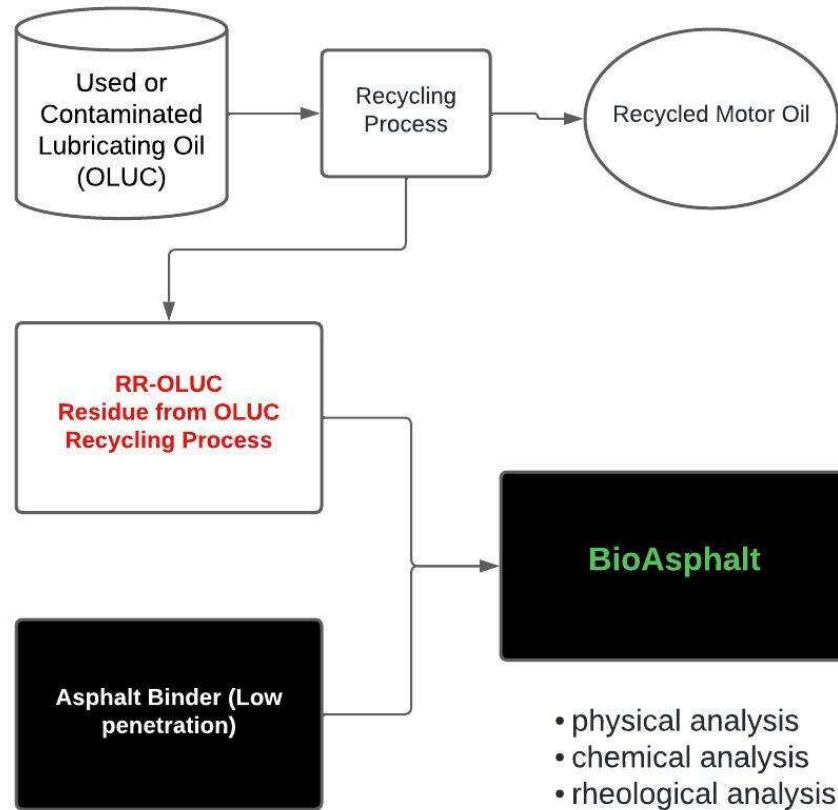


Fig. 3. Flowchart of the research

Research objective:

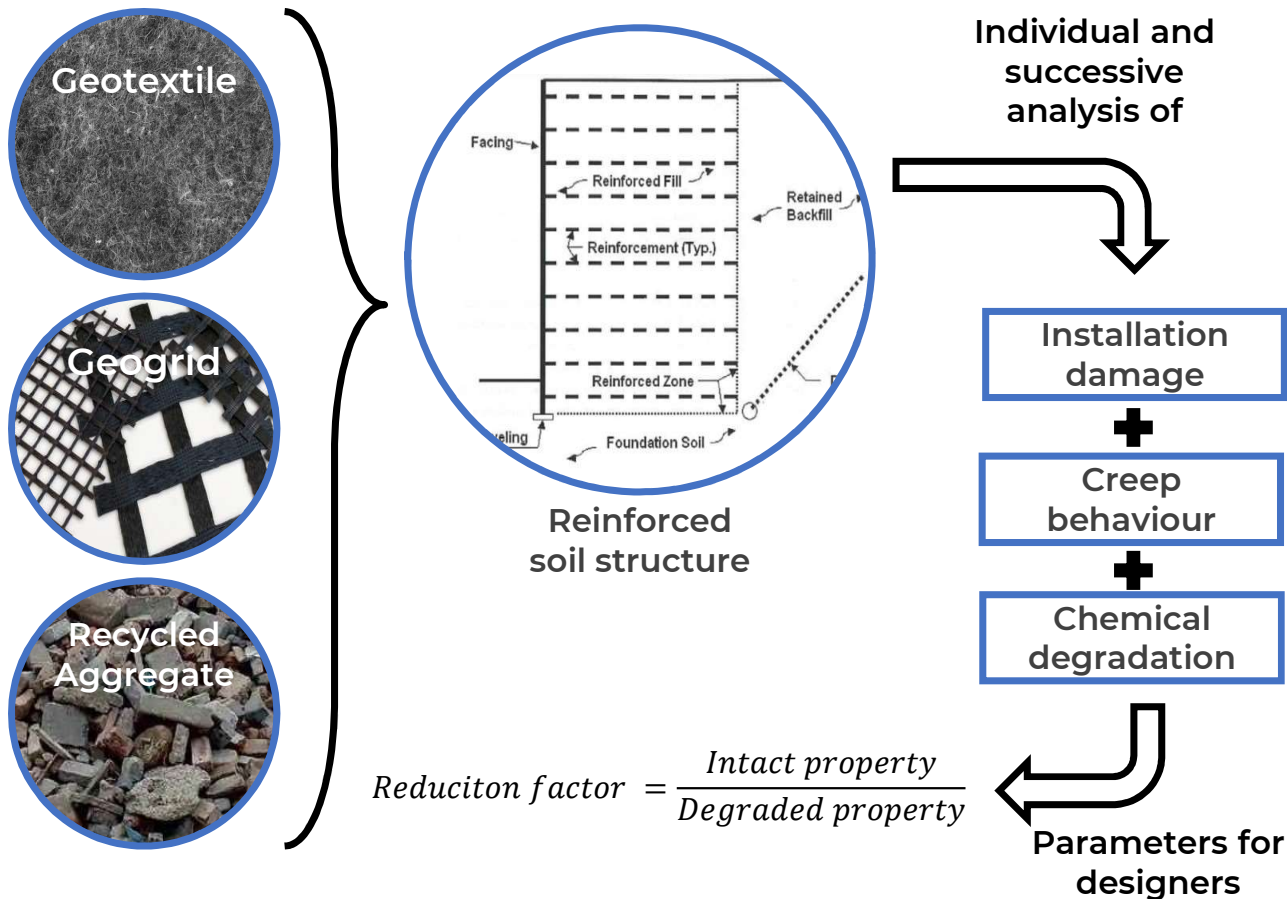
Bioasphalts production with the use of the residue from the recycling of used or contaminated lubricating oil (RR-OLUC) as an anti-ageing additive

Researchers:

Prof. Dr. Caio Rubens Gonçalves Santos
Profª Dra. Flaviane Melo Lopes Vallejo



Engineering – Geotextiles and Geogrids



Research objective :

Installation damage, degradation and creep behaviour of geotextiles and geogrids used as reinforcement element in reinforced structures with recycled construction and demolition waste (RCDW).

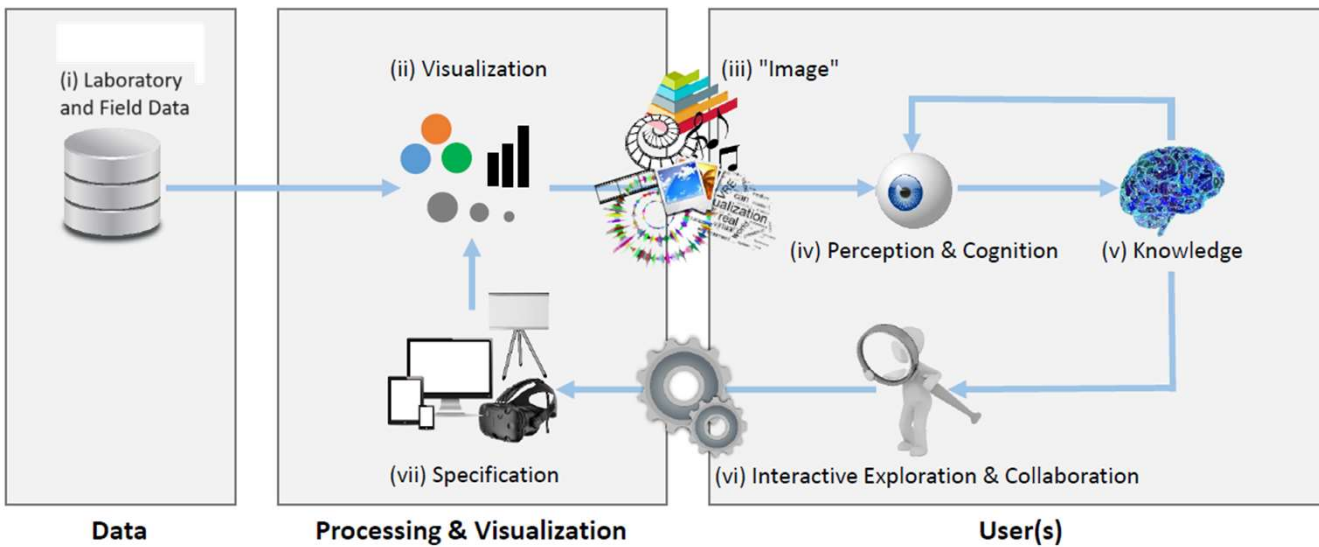
Researchers:

Prof. Me. Mateus Porto Fleury

Fig. 4. Flowchart of the research



Engineering – Geology Laboratory



Research objective:

Development of an Engineering Geology Laboratory using Virtual Reality Environment for Learning Purposes

Researchers:

Prof. Dr. Rafael Ribeiro Placido
Prof. Me. Mateus Porto Fleury

Fig. 5. Adapted from Kraus et al. (2020)





Thank you!

