



Multiscale analysis of fibre-grains interaction mechanisms

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Funding: UNICAS, UGA

1st year at 3SR

Laboratory testing of fibre-reinforced sand:
phenomenology and micro-scale interpretation of
monotonic tests

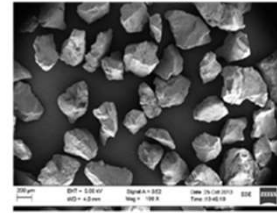
2nd year at UNICAS

Cyclic response of fibre-reinforced sand with triaxial
and torsional shear tests

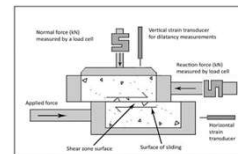
3rd year at 3SR and UNICAS

Characterizing and improving fibre-grains
interactions

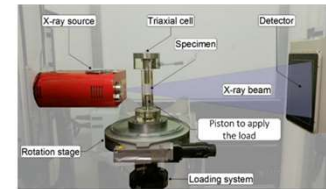
Hostun Sand HN31, $D_{50} = 0.338$ mm



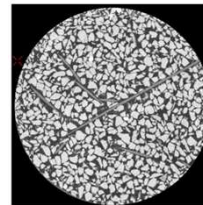
Fluorocarbon Fibers, $d = 0,10$ mm, $\chi_f = w_{sand} * \%$



Direct shear test



Triaxial test



Greyscale image



Segmented grains



Segmented fibres