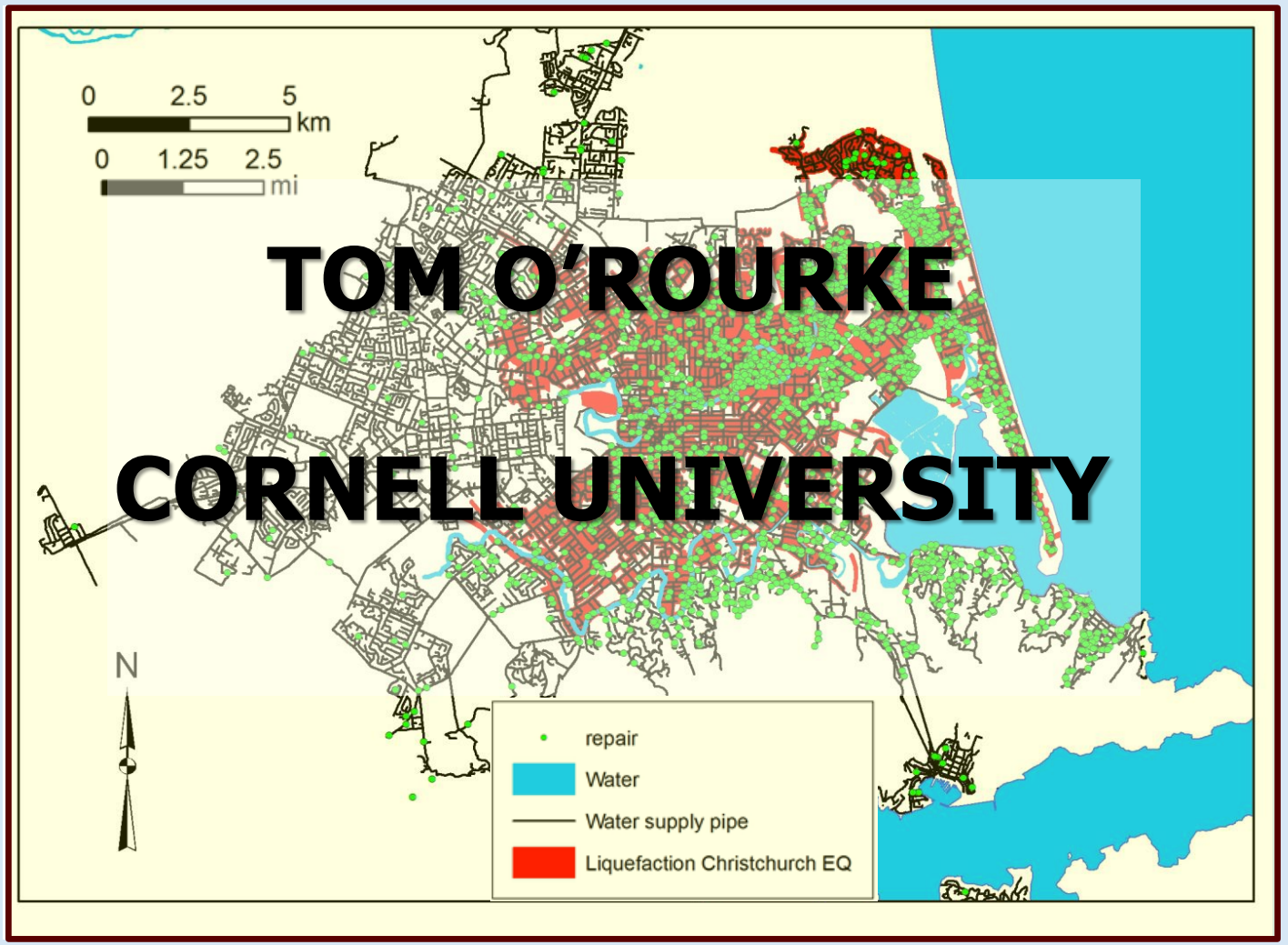
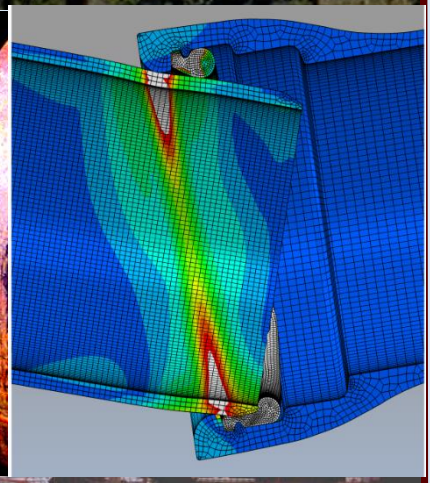
PIPELINE NETWORKS





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OBJECTIVES

- Evaluate underground water, wastewater, electric power, and gas & liquid fuel lifeline system response to liquefaction-induced ground deformation
- Develop an integrated understanding and assessment methodology for pipeline network, transportation, and building system performance
- Design and plan for earthquake resilient pipeline and underground infrastructure systems
- Develop planning, design, and operational procedures consistent with societal needs and disaster-resilient communities

STATUS

- Assessment of Christchurch pipeline systems response to liquefaction-induced ground deformation
- Fragilities for water supply pipeline response to transient and permanent ground deformation
- Characterization of global ground deformation caused by liquefaction during the Canterbury Earthquake Sequence
- Assessment of liquefaction-induced ground deformation from high resolution LiDAR and satellite imagery
- Development of next generation hazard resilient pipelines and underground infrastructure systems

FUTURE WORK

- Continued collaborative work on LiDAR and satellite imagery assessment of post-earthquake ground deformation
- Correlations between liquefaction metrics such LSN and pipeline damage
- Next generation of hazard resilient underground infrastructure

Thank You

Questions?