A new spatial dimension reduction method for representing flood inundation surface and extent

Research objective
To design a new spatial dimension reduction (SDR) method for flood inundation modelling, for constructing a new scheme for modelling flood inundation with high level of accuracy and real-time computational speed.

The test region in the modelling area (Burnett River, QLD)

Defined variables:
- Locations of extent along SDR lines
- Water levels along SDR lines
- No. of SDR lines = No. of required data-driven models

New scheme overview

Research focus

Fig. An example of the comparison between the re-built flood water level and the water level simulated by TUFLOW. Statistical summary:
- Over 96% of inundated grids captured;
- Over 85% grids with errors within ±0.25m.

More Information
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