



Dr Nicolette Chang is a senior researcher at the CSIR, Natural Resources and Environment. She uses numerical modelling to understand the oceanography of the surface ocean. In her work as part of the Southern Ocean Carbon and Climate Observatory (SOCCO), she runs the modelling platform NEMO on the supercomputers at the CHPC. NEMO simulates the interaction of ocean, ice and biogeochemistry in order to understand the role of the Southern Ocean in the global carbon cycle, particularly the spatial scales through which carbon is exchanged between the atmosphere, surface ocean and deep ocean. Additionally, Dr Chang is part of the development team for the CSIR Variable Resolution Earth System Model (CSIR VR-ESM). VR-ESM will incorporate the learning obtained from SOCCO to optimise the physical and biogeochemical dynamics in the Southern Ocean with the aim of reducing its contribution to the uncertainty in predicting global climate.