

Scientist rules the waves

BY THERESE MURRAY

EVER wondered what turns a scientist on?

"what turns a scientist on are those Eureka moments and the incredible feeling that you've discovered something new which overturns the way people have been thinking for decades," said NSW University's world-leading oceanographer Professor Trevor McDougall.

Coming a close second for Prof McDougall, though, is a string of awards including most recently being named Scientist of the Year at the 2023 NSW Premier's Prizes for Science and Engineering.

The awards recognise excellence in science and engineering and honour leading researchers for innovative work that has generated economic, environmental, health, social or technological benefits for NSW.

Prof McDougall, from UNSW Science, took out the prize for his contributions to fathoming the fundamental physics of the ocean and his ground-breaking research in physical oceanography,



World-leading oceanographer Professor Trevor McDougall. Picture by NSW University

transforming the field of ocean thermodynamics.

His research focuses on the ocean's role in climate.

His major discoveries have positioned Australia at the forefront of ocean physics

and climate research.

Plus, his work has improved modelling of the effects of climate change and has led to the discovery of new ocean mixing processes, and the development of new

methods of analysing oceanographic data.

"It is a great honour to be recognised in this way," Prof McDougall said.

"It's tremendous that NSW has these awards to recog-

nise and promulgate science and technology and the importance it has for the state, country, and the world.

"I'll take this award as recognition not only of my own work, but the wider team's

work, and also of the importance of this field of climate science broadly, because when I first had my PhD, we didn't really appreciate the urgency of climate research and even El Nino hadn't yet been discovered."

Prof McDougall's dedication to advancing ocean modelling techniques has not just changed thinking, it has also opened new avenues for future research.

His contributions to the field of oceanography include leading an international group of researchers in redefining the 30-year-old definition of seawater thermodynamics.

He has received significant recognition and awards throughout his career including the 2022 Prime Minister's Prize and the 2016 Laureate Professorial Fellowship of the Australian Research Council.

"Winning the Laureate Fellowship was fantastic because it enabled me to build a team at UNSW and another career highlight was the Prime Minister's Prize for Science," he said.