

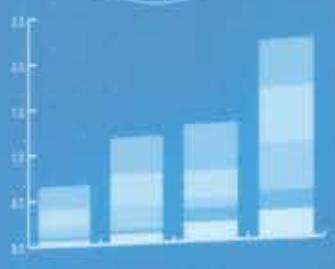
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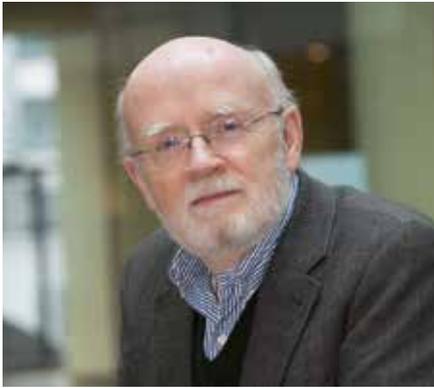
People power

The human side of big data.



Sound the climate siren

An international report has called on the world's policy-makers to help limit global warming to 1.5°C.



Hans-Otto Pörtner

At last count, 181 countries had ratified the Paris Agreement, thereby committing to limit global temperature rises this century below 2°C above pre-industrial levels. The second part of that agreement – sometimes overlooked – is to pursue efforts to limit the temperature increase even further to 1.5°C.

The importance of that “secondary” target has now been highlighted in a report released by the Intergovernmental Panel on Climate Change (IPCC). It details the potential differences of a seemingly small half a degree, and it makes startling reading.

Of particular concern to Australians is that coral reefs would decline by 70–90 per cent by 2100 with global warming of 1.5°C, whereas more

“Coral reefs would decline by more than 99 per cent by 2100 with global warming of 2°C

than 99 per cent would be lost with a rise of 2°C. Additionally, global sea level rises would be 10cm lower with global warming of 1.5°C compared to 2°C.

“Every extra bit of warming matters,” says the IPCC’s Hans-Otto Pörtner, “especially since warming of 1.5°C or higher increases the risk associated with long-lasting or irreversible changes, such as the loss of some ecosystems.”

The report found that limiting global warming to 1.5°C would require “rapid and far-reaching” transitions in land, energy, industry, buildings, transport and cities. This includes the elimination of coal-fired electricity by 2050 as well as a substantial reduction in the use of natural gas. Global net human-caused emissions of CO₂ would have to fall by about 45 per cent from 2010 levels by 2030, reaching “net zero” around 2050. ■

The Rocky path to a cool prize

The storied Rocky Mountain Institute will pony up serious coin for the Global Cooling Prize.

The Rocky Mountain Institute will award an Au\$4.16m prize to encourage research into new home cooling technology.

The Global Cooling Prize is looking for a design of a room air conditioner for a typical tropical or sub-tropical home. The unit must consume five times less grid-supplied electricity, per unit of cooling, than a typical unit in operation today.

“Through technology innovation, we can solve the critical climate threat that comes from growing demand for room air conditioning,” say the Prize organisers.

The winner must operate within predefined constraints on materials, water consumption, power consumption, maintenance requirements, and affordability. ■

Go to globalcoolingprize.org



Anthony Kwong, M.AIRAH, is a principal consultant at Frazer-Nash Consultancy.

Responsibilities

After moving from the UK to Australia five years ago, my responsibility is to promote and develop the technical analysis capability of our business in Australia.

Specialty

My PhD was in acoustics, driven by an interest in music from an early age. However, through my 21-year career with Frazer-Nash Consultancy, I have also worked extensively on fluid dynamics and heat transfer problems. In the UK I was heavily involved with the nuclear power industry. Since moving to Australia I've been fortunate to work on many fascinating projects, such as Sundrop Farms, which operates greenhouses in arid areas using solar thermal renewable technologies.

Passion

My passion has always been learning new skills and expanding my knowledge in engineering.

Challenges

To be able to solve problems in the simplest and most effective way possible, as that requires a good understanding in the first place.

Inspiring words

Mother Teresa said: “Not all of us can do great things, but we can do small things with great love.” I find that very true in engineering.

Favourite destination

I grew up in Hong Kong, moved to the UK when I was 18, and then more recently to Australia, so there are many memorable places I have lived in and visited, and it's quite difficult to single one out! Cambridge and Bristol would rank very high, but I'd also like to believe I haven't yet been to my favourite destination. ■