

Don lauded for work on managing waste water

NTU prof, who developed new system for sewage, gets President's Technology Award

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When Professor Ng Wun Jern ventured into environmental engineering 37 years ago, his realm of expertise did not have a suitable name.

Back then, it was called sanitary engineering, which most people took as the manufacture of urinals and toilet bowls. "The mental picture people had was not very flattering," said the 63-year-old.

Prof Ng went on to become a pioneer in what has evolved into a prestigious profession, where engineers help minimise and manage waste and pollution.

Yesterday, he was given the President's Technology Award by President Halimah Yacob at the Istana, for his work in a field that is now called environmental engineering.

Other researchers were also honoured at the President's Science and Technology Awards cere-

mony for their achievements.

Finance Minister Heng Swee Keat, who spoke at the ceremony, noted that each of the award winners "has achieved some kind of first: whether they are the first to have a particular insight; first to apply their insight in an impactful way; or first to bring others to work together in a new way".

Prof Ng, who is from the School of Civil and Environmental Engineering at Nanyang Technological University, developed a new waste management system for waste water, which includes sewage and chemical waste, one that halved the space taken up by tanks.

A traditional system has tanks filled with micro-organisms to break down sewage, where waste water is continuously churned and mixed to introduce oxygen needed for bacteria activity. The waste water is then transferred to separate tanks, where suspended particles



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PRESIDENT'S SCIENCE AND TECHNOLOGY AWARD WINNERS (from left)

President's Technology Award

Professor Ng Wun Jern, 63 (School of Civil and Environmental Engineering, NTU)

President's Science Award

Professor Gan Wee Teck, 45 (National University of Singapore)

President's Science and Technology Medal

- Professor Edward Warren Holmes, 76 (Yong Loo Lin School of Medicine, NUS)
- Professor David Philip Lane, 65 (Chief scientist, A*Star)

YOUNG SCIENTIST AWARD WINNERS

- Dr Li Jingmei, 35, senior research scientist at A*Star's Genome Institute of Singapore
- Dr Justin Song, 32, scientist at A*Star's Institute of High Performance Computing
- Dr Gao Weibo, 33, from the School of Physical and Mathematical Sciences at NTU

are allowed to settle to the bottom so that the water, with fewer particles, can be discharged.

But Prof Ng discovered that turning off the churning process at certain points in the day to allow for the particles to settle, and then discharging the water directly from that same tank, would be just as efficient, while saving space too.

His system is now being used in

Singapore, as well as in China, Malaysia, Sri Lanka and Taiwan.

When he tried to introduce his system to industry players, it was initially an uphill task. "I was told it was a 'new class' of waste management, which was just a polite way of saying I had no track record and to shoo me away," he said.

But he persevered and eventually got his big break.

Indeed, perseverance is necessary in research, said Professor David Lane, 65, who yesterday received the President's Science and Technology Medal, Singapore's highest honour for research scientists and engineers.

Prof Lane was lauded for his role in developing Singapore's biomedical sciences sector and his contributions to cancer research.

The chief scientist of the Agency for Science, Technology and Research said: "Continuous investment and pursuit are very important to science, often you just have to keep going even when it is not that clear. It might seem dark ahead of you and you have to push quite hard to get to the light."

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