

再生能源研究獲論文獎

Study on Renewable Energy Wins ASME Best Paper Award

機械及自動化工程學系廖維新教授（左）及其學生關明杰博士（右）以發表在 *Smart Materials and Structures* 的論文〈壓電能量收集電路效率與儲能器件電壓之關連〉，獲美國機械工程師學會最佳論文獎。這是該獎自1993年設立以來，首次授予亞洲院校的教研人員。

廖教授對獲獎感到光榮和高興，特別是該項能源研究能獲國際肯定。「我們研究的，是使用壓電元件收集環境中的振動能量的再生能源，以驅動傳感器等電子設備，無需電池，也符合環保原則。」



Prof. W.H. Liao (left) and his former PhD student Dr. M.J. Guan (right) of the Department of Mechanical and Automation Engineering have won the American Society of Mechanical Engineers (ASME) Best Paper Award in Structures for their paper 'On the Efficiencies of Piezoelectric Energy Harvesting Circuits Towards Storage Device Voltages' published in *Smart Materials and Structures*. This makes CUHK the first academic institution from Asia to win this prestigious prize since it was established in 1993.

Prof. Liao said, 'We are excited that the significance and contribution of our research to energy have been recognized internationally. Our paper investigated energy harvested from vibration using piezoelectric materials as an alternative to renewable energy. Piezoelectric power generators were used to transform the mechanical

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energy from vibration into electrical energy, which can replace batteries to supply power to mobile and wireless microsystems. Without using batteries, the self-powered systems will be more environmentally friendly since they are using otherwise wasted mechanical energy from the vibration sources.' 