

MORE THAN FORTY RESEARCH PROJECTS FROM TKU PROFESSORS PATENTED

Many of the TKU researchers have obtained patents, adding up to more than forty cases, according to Office of Research and Development. Founder Clement Chang and President Horng-jinh Chang held a banquet for some of these distinguished scholars recently.

According to Office of Research and Development, those invited professors are as follows.

● Department of Mechanical and Electro-Mechanical Engineering—Jr-syu Yang, Ching-bin Lin, Chao-hwa Liu, Chao-chang Chen, Shang-ming Yang, Huo-shyi Tsay.

● Department of Electrical Engineering—Fong-huei Yeh, Kuo-hsing Cheng, Chun-cheng Chen, Shiann-tsong Sheu, Yang-han Lee.

● Department of Water Resources and Environmental Engineering—Po-Chien Lu, Sue-Huai Gau.

● Department of Chemistry—Kan-nan Chen, Su-fang Chien, Shih-yuan Lee, Meng-shan Lin, Wen-jwu Wang, Chien-chung Cheng, Chun-hung Wu.

Those professors who cooperated with members outside of TKU were not included in this brief list.

Generally, those who passed the application for patents on their research can hold the patents. Sometimes, organizations, such as National Science Council, schools, and certain companies, which sponsor the researches, will obtain the licenses.

Prof. Po-Chien Lu, from the Department of Water Resources and Environmental Engineering, is involved in the study of mechanical heart valves designed to replace defective human valves. A new trileaflet heart valve that recently obtained patents issued by Taiwan and Japan simulates the physiological closing of the aortic valve, leading to optimization of flow patterns with minimization of hemolysis and platelet activation in the valve. Prof. Lu has also developed a new implantable axial flow ventricular assist device that improves recovery from heart failure. Applying the theories of fluid dynamics, the heart pump uses blood as the lubricant in a thin-film hydrodynamic bearing that supports the pump rotor with lower risk of bleeding and thromboembolism and with lower costs than conventional assist devices.

Prof. Jr-syu Yang, from Department of Mechanical and Electro-Mechanical Engineering, has applied for many patents, including five passed cases and three on the way, one to be announced soon (if there is no objection for the announcement within three months, then it will be regarded as passed). Some of his inventions are very interesting, such as an “automatic shoe-brushing machine” and “multiple-functioned stick for the blind.” The latter device includes the functions of lighting in the dark and digital recording. Another professor from DMEME, Dr. Ching-bin Lin holds sixteen patents, including Composite, and Metal-enforcement.

Prof. Fong-huei Yeh and Prof. Fun Ye, Department of Electrical Engineering, have developed a computer for blind people, which can help many people with visual impairment.

Prof. Su-Fang Chien’ s research, “The Conversion of Group B Red Blood

Cells into Group 0” holds two patents. Prof. Kan-nan Chen, Dean of College of Science, obtained two patents.

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