

## TKU TEAMS WON “NATIONAL ROBOT FOOTBALL CHAMPIONSHIP”

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In the “National Robot Football Championship” held on November 5, TKU teams achieved brilliantly, with Department of Electrical Engineering wining the first prize, and Department of Mechanical and Electro-Mechanical Engineering taking the second place in “One on One” game, and the third place in “Three to Three” game.

On top of the championship, Department of Electrical Engineering (DOEE) won both the second and third prizes in the “Competition of Design for Micro-computer Application System” hosted by MOE (no team won the first place).

Prof. Wong Ching-chang, of DOEE, who led the “Robot Football System Lab” to win the FIRA World Robot Football Championship two year ago, has developed more delicate and active robot players for this year. In the four sections, “One on One,” “Three to Three,” “Humanoid,” and “Simulation,” TKU teams beat all the other universities.

This year “humanoid” robots come to show for the first time in football game. According to Huang Kai-hsian, second-year graduate student and leader of the team, the 49-centimeter-high humanoid robot player of TKU outshine other players in the PK game, in which it beat the second place winner Cheng Kong University 2:0. Huang adds that the winning player is the third generation of the prototype, which moves by clambering. The second generation is evolved with feet. The third generation is designed with human proportion, which move with more difficulty than the normal robot player and is easy to fall. Nevertheless, TKU humanoid robot player is the only player which didn’ t fall in the game.

Ph.D. student Cheng Chi-tai indicates that the making of robot player

encompasses the knowledge of C, VHDL, and Assemblage languages, and the expertise in the fields of communication, mechanical control, and electrical engineering. He emphasizes that TKU team won the competition because of her past experiences in the game and good facilitation. The director of the team, Professor Wong Ching-chang will lead the students to Singapore on December 11 at attend the FIRA World Robot Football Championship.

DOEE won five prizes in the “Competition of Design for Micro-computer Application System” hosted by MOE, with two second places— “Applying RFID to the Futurization of Shopping Mall” (directed by Prof. Huang Chong-liang) and “Fuzzy Model-based Control for Buck-boost Power” (directed by Prof. Chou Yung-shan), and three third prizes— “The Design and Practice of Humanoid Robot,” “The Design of Multi-directional Mobile Robot,” and “Multi-directional Image Recognition System and Wireless-web Transmission” all by Prof. Wong Ching-chang. (~ Chi-szu Chen )

