

Around the World

Second IEEE-EMBS international summer school and symposium on medical devices and biosensors



John G. Webster

Dr. Y.T. Zhang organized the Second IEEE-EMBS International Summer School and Symposium on Medical Devices and Biosensors (ISSS-MDBS) with 45 attendees at the Chinese University of Hong Kong, 26 June–2 July 2004 (<http://bme.ee.cuhk.edu.hk/iss-mdb/>). Yongmin Kim from the University of Washington presented D2H2 and telemedicine systems, multimedia and ultrasound systems, and bio-engineering, technology commercialization, and entrepreneurship. Michael

Neuman from Michigan Technological University presented bioamplifiers, ECG machines and cardiac monitoring, biotelemetry and wireless sensors, glucose and other bioanalytical and protein sensors, and bio-MEMS, thin and thick film sensors. Toshio Tamura from the National Institute for Longevity Sciences presented temperature, flow, and respiratory gas sensing, homecare and telemonitoring systems, motion analysis sensors, and drug delivery systems. John Webster from the University of Wisconsin presented

biopotentials and electrodes, photonic sensors, hemoglobin sensors, SpO₂, pacemakers and defibrillators, and electrosurgery and ablation. Y.T. Zhang from the Chinese University of Hong Kong presented blood pressure devices.

The five-day summer school included seven labs on the basics of wireless application protocol and its application in telemedicine, near-field scanning optical imaging of grid sample, surface plasmon resonance experiments and near-infrared spectroscopy experiments, experiments on electromyography, evoked action potential and nerve conduction velocity, measurement of blood oxygen saturation, the electrocardiogram, and noninvasive measurement of blood pressure.



Summer school attendees and instructors (front row, third from left) Y.T. Zhang, Yongmin Kim, John Webster, Michael Neuman, and Toshio Tamura.



Paolo Caselli stimulates at the elbow and measures EMG on the hand to calculate nerve velocity.



Antonio Leonida uses the Finometer to measure beat-to-beat blood pressure wave shape at the fingertip.



Patrick Otoo Bobbie measures and displays his 12-lead electrocardiogram.