Recent advances and trend in the design and manufacturing of blood glucose monitoring systems

Rahnfong Lee, Hsin Yi Kuo, Hsiu Ching Chen, Ho Chang and **Jin Siang Shaw**
National Taipei University of Technology, Taiwan

This paper presents the current status and the recent advances in applying cyber-physical system (CPS) to the design and manufacturing of blood glucose monitoring system (BGMS). It shows great promise to implement CPS architecture to the design and manufacturing of BGMS. The implementation of CPS to the design and manufacturing of BGMS interconnects the uses of glucose meters, test strips and control solutions with the manufacturing systems through cyber space to enhance the safety and performance of the BGMS. The implementation of CPS to the design and manufacturing of BGMS further interconnects sensors and information feedbacks from different work stations to allow the manufacturing systems to be self-aware, self-adaptable and self-configurable, to reduce manpower, defective rate and production down time for better productivity. This new concept will bring in revolutionary approaches into the design and manufacturing of BGMS, in order to upgrade product performance, increase product competitiveness and create new business opportunities.

Speaker Biography

Rahnfong Lee has completed his PhD in 1988 at the age of 27 years from University of Massachusetts at Amherst, USA. He is the Adjunct Professor of National Taipei University of Technology, Taiwan. He has worked over 20 years in the industry of glucose monitoring, and has filed over 50 patents worldwide. He is currently assisting companies in Algeria and Saudi Arabia to locally produce glucose monitoring systems with new technologies, such as 100% non-destructive online quality check on every test strips to identify bad strips and fix them with laser technology to become good strips. He is the first one to produce glucose test strips with gold plated printed circuit boards.

e: eglucose@gmail.com

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