IEEE San Fernando Valley Section Engineering in Medicine and Biology Society Chapter

PRESENTS

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Characterizing Parameter Uncertainty in an Artificial Pancreas System for Patients with Type 1 Diabetes

Recent years have witnessed vigorous research and development of an Artificial Pancreas system (AP), which attempts to "close the loop" through communications between continuous glucose monitors and insulin pumps. This technology aims to relieve patients with type 1 diabetes from the responsibility of manual insulin dosing. Physiological modeling is a pragmatic methodology for explaining observed dynamic effects, interpreting experimental data and predicting system responses to stimuli. This discussion will cover three main aspects of AP development: (1) characterizing "insulin sensitivity", one of the most critical parameters of glucose-insulin physiological modeling; (2) improving the short-term blood glucose forecasting through structural design of optimal estimator and predictor; and (3) designing an advisory system to help type 1 patients with insulin dosing decisions.

Boyi Jiang received his PhD from the Department of Systems & Information Engineering at the University of Virginia. His research for the Center for Diabetes Technology focused on physiological modeling, control design and application development of closed-loop insulin delivery system. His is currently working at Medtronic Diabetes on advanced sensor analytics. Dr. Jiang's extracurricular activities include snowboarding, hiking and movies.

August 27, 2015, Thursday 6:00 p.m.
Light dinner will be served, presentation starts at 7 p.m.
Medtronic Diabetes
18000 Devonshire St
Northridge, CA 91325

Registration is required: http://embs-jiang-2015.eventbrite.com
Please register by Sunday, August 23