# Session 4.1

# Biomedical Systems Modeling, Analysis and Control

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### Identification of Linear Dynamic Models for Type 1 Diabetes: A Simulation Study

D. A. Finan and D. E. Seborg
*University of California, Santa Barbara*

### Dynamic Modeling of Exercise Effects on Plasma Glucose and Insulin Levels

*A. Roy and R. S. Parker*
*University of Pittsburgh*

### Pathways for Optimization-Based Drug Delivery Systems and Devices

L. Bleris, P. Vouzis, M. V. Arnold and M. V. Kothare,
*Lehigh University*

### Flexible Run-to-Run Strategy for Insulin Dosing in Type 1 Diabetic Subjects

C. C. Palerm, H. Zisser, L. Jovanovic and F. J. Doyle, III
*University of California, Santa Barbara*

### Nonlinear Model Predictive Control for Optimal Discontinuous Drug Delivery

N. Hudon, M. Guay, M. Perrier and D. Dochain
*Queen's University*