Publications:

Overnight glucose control in people with type 1 diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2018

Adaptive control in an artificial pancreas for people with type 1 diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2016

An Adaptive Nonlinear Basal-Bolus Calculator for Patients With Type 1 Diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2016

C code generation applied to nonlinear model predictive control for an artificial pancreas
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

Model for Simulating Fasting Glucose in Type 2 Diabetes and the Effect of Adherence to Treatment.
Publication: Research - peer-review › Conference article – Annual report year: 2017

An Efficient UD-Based Algorithm for the Computation of Maximum Likelihood Sensitivity of Continuous-Discrete Systems
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

An Ensemble Nonlinear Model Predictive Control Algorithm in an Artificial Pancreas for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Application of the Continuous-Discrete Extended Kalman Filter for Fault Detection in Continuous Glucose Monitors for Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016

Comparison of Three Nonlinear Filters for Fault Detection in Continuous Glucose Monitors
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016
Computational Methods for Model Predictive Control: New Opportunities for Computational Scientists
Publication: Research › Sound/Visual production (digital) – Annual report year: 2012

Control of Blood Glucose for People with Type 1 Diabetes: an in Vivo Study
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Model Predictive Control Algorithms for Pen and Pump Insulin Administration
239 p. (IMM-PHD-2012; No. 283).
Publication: Research › Ph.D. thesis – Annual report year: 2013

Overnight Control of Blood Glucose in People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Tuning of Controller for Type 1 Diabetes Treatment with Stochastic Differential Equations
Publication: Research - peer-review › Article in proceedings – Annual report year: 2012

Closed-Loop and Semi Closed-Loop Strategies for Control of Blood Glucose in People with Type 1 Diabetes
Publication: Research › Poster – Annual report year: 2011

Insulin Administration for People with Type 1 diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Strategies for glucose control in people with type 1 diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

ARX MPC for people with type 1 diabetes
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2010

Implications and Limitations of Ideal Insulin Administration for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010
Meal Estimation in Nonlinear Model Predictive Control for Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Nonlinear Model Predictive Control for an Artificial Beta-Cell
Publication: Research - peer-review › Book chapter – Annual report year: 2010

Optimal Insulin Administration for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

DiaCon: an interdisciplinary approach to diabetes control
Publication: Research - peer-review › Poster – Annual report year: 2009

Projects:

A bi-hormonal Artificial Pancreas based on an Ensemble Nonlinear Model Predictive Control Algorithm
Boiroux, D. 01/08/2014 → 31/07/2017
Project

Model Predictive Control algorithms for pen and pump insulin administration
Project: PhD

Activities:

Mathematical modeling of neurons: Perspectives for the treatment of epilepsy
Boiroux, D. (Guest lecturer) 13 Dec 2017
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

10th International Conference on Advanced Technologies and Treatments for Diabetes
Boiroux, D. (Participant) 15 Feb 2017 → 18 Feb 2017
Activity: Attending an event › Participating in or organising a conference

University of Virginia
Activity: Visiting an external institution › Visiting another research institution

19th Nordic Process Control Workshop
Boiroux, D. (Speaker) 16 Jan 2015
Activity: Talks and presentations › Conference presentations