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

**Model Identification using Continuous Glucose Monitoring Data for Type 1 Diabetes**  
Publication: Research - peer-review › Conference article – Annual report year: 2016

**On the significance of the noise model for the performance of a linear MPC in closed-loop operation**  
Publication: Research - peer-review › Article in proceedings – Annual report year: 2016
A Bolus Calculator Based on Continuous-Discrete Unscented Kalman Filtering for Type 1 Diabetics
Publication: Research - peer-review › Conference article – Annual report year: 2015

A Continuous-Discrete Extended Kalman Filter for State and Parameter Estimation in People with Type 1 Diabetes
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2015

An artificial pancreas for automated blood glucose control in patients with Type 1 diabetes
Publication: Research - peer-review › Journal article – Annual report year: 2015

Bi-hormonal Closed-loop Control of Blood Glucose for People With Type 1 Diabetes - the Diacon Project
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2015

Comparison of Prediction Models for a Dual-Hormone Artificial Pancreas
Publication: Research - peer-review › Conference article – Annual report year: 2015

Remarks on models for estimating the carbohydrate to insulin ratio and insulin sensitivity in T1DM
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

The contribution of glucagon in an Artificial Pancreas for people with type 1 diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Assessment of Model Predictive and Adaptive Glucose Control Strategies for People with Type 1 Diabetes
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Model-Based Closed-Loop Glucose Control in Type 1 Diabetes: The DiaCon Experience
Publication: Research - peer-review › Journal article – Annual report year: 2013

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

Control of Blood Glucose for People with Type 1 Diabetes: an In Vivo Study
Publication: Research › Sound/Visual production (digital) – Annual report year: 2012

Model Predictive Control Algorithms for Pen and Pump Insulin Administration
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
Project

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

Activities:

Mathematical modeling of neurons: Perspectives for the treatment of epilepsy
Activity: Talks and presentations › Guest lectures, external teaching and course activities at other universities

10th International Conference on Advanced Technologies and Treatments for Diabetes
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
Activity: Talks and presentations › Conference presentations