Thomas Martini Jørgensen - DTU Orbit (01/01/2018)

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Department of Applied Mathematics and Computer Science - Senior Researcher

Statistics and Data Analysis

Publications:

**Imaging for monitoring downstream processing of fermentation broths**
Moiseyenko, R., Baum, A., Jørgensen, T. M., Glanville, S., Laursen, C. N., Mansouri, S. S. & Gernaey, K. V. 2017
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

**Interpolation from Grid Lines: Linear, Transfinite and Weighted Method**
Publication: Research - peer-review › Article in proceedings – Annual report year: 2017

**Quantitatively Measured Anatomic Location and Volume of Optic Disc Drusen: An Enhanced Depth Imaging Optical Coherence Tomography Study**
Publication: Research - peer-review › Journal article – Annual report year: 2017

**Unraveling fermentation data – a Novozymes case study**
Baum, A., Vermue, L., Moiseyenko, R., Jørgensen, T. M. & Devantier, R. 2017
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

**Analysis of data from the MariCare Smartfloor at Skovhuset Care Home**
Publication: Research › Report – Annual report year: 2016

**Artifact removal in Differential Phase Contrast X-ray Computed Tomography**
Publication: Research - peer-review › Report chapter – Annual report year: 2016

**Back scattering interferometry revisited – A theoretical and experimental investigation**
Publication: Research - peer-review › Journal article – Annual report year: 2015

**Do different spectral domain OCT hardwares measure the same? Comparison of retinal thickness using third-party software**
Publication: Research - peer-review › Journal article – Annual report year: 2015

**Evaluation of back scatter interferometry, a method for detecting protein binding in solution**
Publication: Research - peer-review › Journal article – Annual report year: 2014
Modeling light-tissue interaction in optical coherence tomography systems
Publication: Research - peer-review › Book chapter – Annual report year: 2015

Modeling light–tissue interaction in optical coherence tomography systems
Publication: Research - peer-review › Book chapter – Annual report year: 2015

The likelihood principle and its proof – a never-ending story…
Publication: Research - peer-review › Article in proceedings – Annual report year: 2015

Demystifying back scatter interferometry: a sensitive refractive index detector.
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2015

Optical tissue clearing improves usability of optical coherence tomography (OCT) for high-throughput analysis of the internal structure and 3D morphology of small biological objects such as vertebrate embryos
Publication: Research - peer-review › Article in proceedings – Annual report year: 2014

Refractive index based measurements
Sørensen, H. S. & Jørgensen, T. M. 2014
Publication: Research › Patent – Annual report year: 2014

Refractive index based measurements
Sørensen, H. S. & Jørgensen, T. M. 2014
Publication: Research › Patent – Annual report year: 2014

Refractive index based measurements
Sørensen, H. S. & Jørgensen, T. M. 2014
Publication: Research › Patent – Annual report year: 2014

An elegant technique for ex vivo imaging in experimental research—Optical coherence tomography (OCT)
Publication: Research - peer-review › Journal article – Annual report year: 2013

Optical Coherence Tomography: Advanced Modeling
Publication: Research - peer-review › Book chapter – Annual report year: 2013

Optical coherence tomography (OCT) as a 3-dimensional imaging technique for non-destructive testing of roll-to-roll coated polymer solar cells
Publication: Research - peer-review › Article in proceedings – Annual report year: 2013
Application of optical coherence tomography (OCT) as a 3-dimensional imaging technique for roll-to-roll coated polymer solar cells
Publication: Research - peer-review › Journal article – Annual report year: 2011

A Deformable Model for Bringing Particles in Focus
Publication: Research - peer-review › Article in proceedings – Annual report year: 2011

Backscattering Interferometry
Serensen, H. S., Hillestrøm, A. & Jørgensen, T. M. 2011
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2011

Biomologic Sensing
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2011

Biomologic Sensing
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2011

How histological features of basal cell carcinomas influence image quality in optical coherence tomography
Publication: Research - peer-review › Journal article – Annual report year: 2011

Non-contact assessment of the food quality using optical imaging methods
Kamran, F., Andersen, P. E. & Jørgensen, T. M. 2011
Publication: Research - peer-review › Poster – Annual report year: 2011

Optical coherence tomography—current technology and applications in clinical and biomedical research
Marschall, S., Sander, B., Mogensen, M., Jørgensen, T. M. & Andersen, P. E. 2011 In : Analytical and Bioanalytical Chemistry. 400, 9, p. 2699-2720
Publication: Research - peer-review › Journal article – Annual report year: 2011

Potential In Vivo UVC Disinfection of Catheter Lumens: Estimation of the Doses Received by the Blood Flow Outside the Catheter Tip Hole
Publication: Research - peer-review › Journal article – Annual report year: 2011

Axonal loss occurs early in dominant optic atrophy
Publication: Research - peer-review › Journal article – Annual report year: 2010
Improved quality of optical coherence tomography imaging of basal cell carcinomas using speckle reduction
Publication: Research - peer-review › Journal article – Annual report year: 2010

Macular morphology and visual acuity after macular hole surgery with or without internal limiting membrane peeling
Publication: Research - peer-review › Journal article – Annual report year: 2010

Optical coherence tomography: [Invited review article]
Publication: Research - peer-review › Book chapter – Annual report year: 2009

Shape and Size from the Mist: A Deformable Model for Particle Characterization
Publication: Research - peer-review › Article in proceedings – Annual report year: 2010

Assessment of Optical Coherence Tomography Imaging In the Diagnosis of Non-Melanoma Skin Cancer and Benign Lesions Versus Normal Skin: Observer-Blinded Evaluation by Dermatologists and Pathologists
Publication: Research - peer-review › Journal article – Annual report year: 2009

Biomedical optical imaging: noninvasive, instant diagnostics
Publication: Communication › Book chapter – Annual report year: 2009

OCT imaging of skin cancer and other dermatological diseases
Publication: Research - peer-review › Journal article – Annual report year: 2009

Optical coherence tomography for imaging of skin and skin diseases
Publication: Research - peer-review › Journal article – Annual report year: 2009

Optical coherence tomography: Technique and applications
Publication: Research - peer-review › Book chapter – Annual report year: 2009

Which histological characteristics of basal cell carcinomas influence the quality of optical coherence tomography imaging?
Publication: Research - peer-review › Article in proceedings – Annual report year: 2009

A sequential compounding scheme for significant reduction of speckle noise for optical coherence tomography imaging in dermatology
Modeling light-tissue interaction in optical coherence tomography systems

Normative data of outer photoreceptor layer thickness obtained by software image enhancing based on Stratus optical coherence tomography images

Optical Doppler tomography based on a field programmable gate array

Optical Doppler tomography for monitoring vascularization during photodynamics therapy of skin cancer lesions

Photoreceptor atrophy in acute zonal occult outer retinopathy

Characterization of a Pseudomonas putida rough variant evolved in a mixed species biofilm with Acinetobacter sp. strain C8

Chromosomal analysis and identification based on optical tweezers and Raman spectroscopy: Comment

Contrast enhancement of retinal B-scans from OCT/Stratus by image registration: Clinical applications

Diagnosis of non-melanoma skin cancer with optical coherence tomography

Diagnostic accuracy and potential of optical coherence tomography in diagnosis of non-melanoma skin cancer: A clinical study

Diagnostic potential of optical coherence tomography in non-melanoma skin cancer: a clinical study
Macular morphology after surgery for idiopathic macular hole as determined by enhanced OCT imaging
Publication: Research - peer-review › Journal article – Annual report year: 2006

MICCAI ’06 - Workshop on Biophotonics Imaging for Diagnostics and Treatment, October 6, 2006 proceedings, 9th MICCAI Conference
Ersbøll, B. K. & Jørgensen, T. M. 2006
Publication: Research - peer-review › Report – Annual report year: 2006

Optical coherence tomography in dermatology
Publication: Research › Article in proceedings – Annual report year: 2006

Photoreceptor atrophy in acute zonal occult outer retinopathy
Publication: Research - peer-review › Conference abstract in journal – Annual report year: 2006

Time spent on treatment (TSOT). An independent assessment of disease severity in atopic dermatitis
Publication: Research - peer-review › Journal article – Annual report year: 2006

What retinal/choroidal layer is first affected in helicoid peripapillary chorioretinal degeneration?
Publication: Research › Conference abstract for conference – Annual report year: 2006

Brain tumor identification by use of ultrahigh resolution optical coherence tomography and tissue optics analysis
Publication: Research › Conference abstract for conference – Annual report year: 2005

Dynamic contour model for aligning and segmenting OCT B-scans
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Enhanced optical coherence tomography imaging by multiple scan averaging
Publication: Research - peer-review › Journal article – Annual report year: 2005

Extraction of tissue optical properties from optical coherence tomography images for diagnostic purposes (invited paper)
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005
Improved OCT Imaging with a new averaging method
Publication: Research › Journal article – Annual report year: 2006

Optical Doppler coherence tomography based on a field programmable gate array
Publication: Research › Article in proceedings – Annual report year: 2005

Photoreceptors are affected before the retinal pigment epithelium in helicoid peripapillary chorioretinal degeneration (HPCD)
Publication: Research › Journal article – Annual report year: 2006

Advanced modelling of optical coherence tomography systems
Publication: Research - peer-review › Journal article – Annual report year: 2004

Characterizing tissue optical properties by use of optical coherence tomography for diagnostics
Publication: Research - peer-review › Journal article – Annual report year: 2004

Demonstration of the true-reflection OCT imaging algorithm on a heterogeneous multilayered structure
Publication: Research - peer-review › Article in proceedings – Annual report year: 2004

Extraction of optical scattering parameters and attenuation compensation in optical coherence tomography images of multilayered tissue structures
Publication: Research - peer-review › Journal article – Annual report year: 2004

Monte Carlo modeling of optical coherence tomography systems
Publication: Research › Article in proceedings – Annual report year: 2004

Optical coherence tomography: advanced modelling
Publication: Research - peer-review › Book chapter – Annual report year: 2004

Reducing speckle noise in retinal OCT images by aligning multiple B-scans
Assessing blood vessel abnormality via extracting scattering coefficients from OCT images
Levitz, D., Andersen, C. B., Frosz, M. H., Thrane, L., Hansen, P. R., Jørgensen, T. M. & Andersen, P. E. 2003

Enhanced-resolution optical coherence tomographic imaging of ischemic and edematous retinal damage

Et kig bag computerens øjne - maskinsyn og active appearence modeller
Jørgensen, T. M. 2003

Image processing scheme for enhancing retinal oct scans

Modeling the optical coherence tomography geometry using the extended Huygens-Fresnel principle and Monte Carlo simulations

Monte Carlo modeling of optical coherence tomography systems (invited lecture)

Monte Carlo modelling of optical coherence tomography systems (invited talk)
Andersen, P. E., Tycho, A., Jørgensen, T. M. & Yura, H. T. 2003

OCT modelling: From theory towards clinical applications (invited paper)

Quantification of biofilm structure from confocal imaging
Jørgensen, T. M. 2003

Derivation of a Monte Carlo method for modeling heterodyne detection in optical coherence tomography systems

3D imaging of biological tissue using OCT

An N-tuple ensemble classifier model for predicting whether a bank client is active or not
Jørgensen, T. M. 2002
Automated thresholding for separating biofilms from the background
Jørgensen, T. M. 2002
Publication: Research › Conference abstract for conference – Annual report year: 2002

BIOP activities at OFD, Risø
Jørgensen, T. M. 2002
Publication: Research › Conference abstract for conference – Annual report year: 2002

Comment on "Excitation with a Focused, Pulsed Optical Beam in Scattering Media: Diffraction Effect"
Publication: Research - peer-review › Journal article – Annual report year: 2002

Develop of Monte Carlo code for light transport supporting 3D geometries
Prieto, J. S. & Jørgensen, T. M. 2002
Publication: Research › Conference abstract for conference – Annual report year: 2002

Enhancing imaging of retinal optical coherence tomography scans (poster)
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

Optical coherence tomography: Advanced modeling (invited presentation)
Andersen, P. E., Thrane, L., Yura, H. T., Tycho, A. & Jørgensen, T. M. 2002
Publication: Research › Conference abstract for conference – Annual report year: 2002

Optical coherence tomography: Applications in cardiology and dermatology
Publication: Research › Conference abstract for conference – Annual report year: 2002

Optical coherence tomography for intracoronary diagnostics
Publication: Research › Conference abstract in proceedings – Annual report year: 2002

Optisk kohærenstomografi
Publication: Communication › Journal article – Annual report year: 2002

Optisk kohærenstomografi - billeddannelse af væv til brug i klinisk diagnostik
Publication: Communication › Journal article – Annual report year: 2002

True-reflection OCT imaging
Publication: Research - peer-review › Article in proceedings – Annual report year: 2002

3D imaging of biological tissue using OCT (poster)
Publication: Research › Poster – Annual report year: 2001

Assessment of the intrinsic noise in optical coherence tomography images (oral presentation)
Jørgensen, T. M., Thrane, L. & Ersebøll, B. 2001
Feature weighted ensemble classifiers - a modified decision scheme

Kursus i biomedicinsk optik
Jørgensen, T. M. 2001

Modeling OCT by rolling a dice (oral presentation)
Jørgensen, T. M. 2001

Optical coherence tomography

Optical coherence tomography for intracoronary diagnostics
Levitz, D., Hansen, P. R., Thrane, L., Andersen, P. E., Jørgensen, T. M., Andersen, C. & Pedersen, F. 2001

Investigating the focusing problem in OCT: Comparison of Monte Carlo simulations, the extended Huygens-Fresnel principle and experiments

Modeling the optical coherence tomography geometry using the extended Huygens-Fresnel principle and Monte Carlo simulations (invited paper)

Subspace projections - an approach to variable selection and modeling

The n-tuple classifier with arbitrary threshold levels - theory and implications

A statistical framework for analysing and improving the behaviour of the standard n-tuple classifier

Boosting the performance of weightless neural networks by using a post-processing transformation of the output scores
Cross-validation techniques for N-tuple based neural networks
Publication: Research - peer-review › Article in proceedings – Annual report year: 1999

Discretization methods for encoding of continuous input variables for Boolean neural networks
Publication: Research › Article in proceedings – Annual report year: 1999

The hidden continuous weights of the standard n-tuple neural net
Publication: Research › Article in proceedings – Annual report year: 1999

Theoretical analysis and improved decision criteria for the n-tuple classifier
Publication: Research - peer-review › Journal article – Annual report year: 1999

Cross-validation and information measures for RAM based neural networks
Publication: Research - peer-review › Book chapter – Annual report year: 1998

Cross-validation techniques for N-tuple based neural networks
Publication: Research › Conference abstract for conference – Annual report year: 1998

Detecting danger labels with ram based neural networks
Publication: Research - peer-review › Book chapter – Annual report year: 1998

Optimisation of RAM nets using inhibition between classes
Publication: Research - peer-review › Book chapter – Annual report year: 1998

Segmentation-classification interaction for intelligent character recognition (ICR)
Publication: Research › Conference abstract in proceedings – Annual report year: 1998

The n-tuple classification concept
Jørgensen, T. M. 1998
Publication: Research › Conference abstract for conference – Annual report year: 1998

Classification of handwritten digits using a RAM neural net architecture
Publication: Research - peer-review › Conference article – Annual report year: 1997

Combining depth and colour data for 3D object recognition
Publication: Research › Article in proceedings – Annual report year: 1997
Kunstige neurale netværk
Jørgensen, T. M. & Linneberg, C. 1997 In: Risønyt. 4, p. 10-11
Publication: Communication › Journal article – Annual report year: 1997

Shape recognition
Publication: Research › peer-review › Book chapter – Annual report year: 1997

Anvendelse af kunstige neurale net til vision opgaver
Jørgensen, T. M. 1996
Publication: Research › Conference abstract for conference – Annual report year: 1996

A RAM-based neural net with inhibitory weights and its application to recognising handwritten digits
Publication: Research › Article in proceedings – Annual report year: 1996

Classification of handwritten digits using a RAM neural net architecture
Publication: Research › Article in proceedings – Annual report year: 1996

Concept of RAM based neural networks
Jørgensen, T. M. 1996
Publication: Research › Conference abstract for conference – Annual report year: 1996

Detecting danger labels with RAM-based neural networks
Jørgensen, T. M., Christensen, S. S. & Andersen, A. W. 1996 In: Pattern Recognition Letters. 17, 4, p. 399-412
Publication: Research › Journal article – Annual report year: 1996

Examples of machine vision applications in the food industry
Weimar Andersen, A. & Jørgensen, T. M. 1996
Publication: Research › Conference abstract for conference – Annual report year: 1996

Neural net based image processing for disassembling TV-sets
Publication: Research › Article in proceedings – Annual report year: 1996

Shape recognition system for automatic disassembly of TV-sets
Publication: Research › Article in proceedings – Annual report year: 1996

Visual guidance of a pig evisceration robot using neural networks
Publication: Research › Journal article – Annual report year: 1996

An information measure for optimization of RAM nets
Publication: Research › Article in proceedings – Annual report year: 1995
Detection and estimation in quantum limited light scattering systems, or how to make the best use of photons
Lading, L. & Jørgensen, T. M. 1994
Publication: Research › Conference abstract for conference – Annual report year: 1994

Diffraction from a wavelet point of view: Comment
Publication: Research › peer-review › Journal article – Annual report year: 1994

Optimization and application of a RAM based neural network for fast image processing tasks
Publication: Research › Article in proceedings – Annual report year: 1994

Optoelectronic loop that implements a mean field annealing algorithm for nonlinear noise filtering
Publication: Research › Journal article – Annual report year: 1994

Q-state mean field annealing algorithm for filtering of grey level images suited for optoelectronic implementation
Publication: Research › Article in proceedings – Annual report year: 1994

En optisk neural sløjfe
Publication: Communication › Journal article – Annual report year: 1993

En optisk neural sløjfe
Jørgensen, T. M. & Glückstad, J. 1993 In : Kvant. 4, 2, p. 20-21
Publication: Communication › Journal article – Annual report year: 1993

Nonlinear noise filtering and texture recognition by an optoelectronic neural network that implements a mean field annealing algorithm
Publication: Research › Article in proceedings – Annual report year: 1993

Optical wavelet transform. Paper P19
Publication: Research › Conference abstract in proceedings – Annual report year: 1993

Optical wavelet transform. Paper P27
Publication: Research › Conference abstract in proceedings – Annual report year: 1993

A low-cost surface laser light scattering spectrometer
Publication: Research › peer-review › Journal article – Annual report year: 1992

Måling af viskoelastiske parametre via dynamisk overfladespredning
Publication: Communication › Journal article – Annual report year: 1992
Neural network activities at OFD, Risø National Laboratory
Jørgensen, T. M. 1992
Publication: Research › Conference abstract for conference – Annual report year: 1992

Nonlinear filtering and feature extraction by use of an optical loop
Glückstad, J. & Jørgensen, T. M. 1992
Publication: Research › Conference abstract for conference – Annual report year: 1992

Parameter estimation with incomplete a priori information. Photoelectron counts
Publication: Research › Article in proceedings – Annual report year: 1992

Derivation of the vectorial wave equation from a variational point of view
Jørgensen, T. M. 1991 In : Journal of the Optical Society of America A. 8, p. 750-754
Publication: Research - peer-review › Journal article – Annual report year: 1991

Figures of merit and synthesis of optimum laser anemometer configurations
Publication: Research › Article in proceedings – Annual report year: 1990

Maximizing the information transfer in a quantum-limited light-scattering system
Publication: Research › Journal article – Annual report year: 1990

Projects:

3D Optical Coherence Tomography for Retinopathy and Optic Neuropathy
Lindberg, A. W., Jørgensen, T. M., Dahl, V. A. & Hammann, S. E.
01/12/2014 → 30/03/2019
Project: PhD

Back Scatter Interferometric Sensor for label-free medical diagnostic assays
01/08/2011 → 01/10/2015
Project

Optisk biosensor
Sørensen, H. S., Jørgensen, T. M. & Hillestrøm, A.
07/02/2011 → 06/08/2011
Project

Centre for imaging food quality
Andersen, P. E., Jørgensen, T. M., Kamran, F. & Larsen, R.
01/06/2010 → 31/12/2014
Project
Ophthalmic OCT prototype at 1050 nm
Jørgensen, T. M., Thrane, L. & Zong, W.
01/04/2010 → 01/10/2010
Project

On-chip Backscattering Interferometry
Sørensen, H. S., Jørgensen, T. M., Andersen, P. E., Larsen, N. B. & Hillestrøm, A.
01/07/2009 → 30/06/2011
Project

Process Visualisation and Analysis Endoscope System
Jørgensen, T. M. & Gundu, P. N.
01/01/2009 → 01/04/2010
Project

Functional optical coherence tomography : 1700185 consortium agreement EU-FP7
Andersen, P. E., Thrane, L., Jørgensen, T. M., Isomäki, A. & Marschall, S.
01/04/2008 → 01/04/2012
Project

Ultrabroad bandwidth light sources based on nano-structuring devices : NANO UB-SOURCES
Andersen, P. E., Thrane, L., Jørgensen, T. M. & Thomsen, J. B.
01/09/2005 → 31/01/2009
Project

Activities:

Making sense of big data for Produced Water Treatment
Jørgensen, T. M. (Invited speaker)
17 Nov 2016
Activity: Talks and presentations › Conference presentations

The likelihood principle and its proof – a never-ending story…
Jørgensen, T. M. (Lecturer)
27 Jan 2015
Activity: Talks and presentations › Conference presentations

Optical Coherence Tomography for biomedical imaging
Jørgensen, T. M. (Lecturer)
12 Dec 2014
Activity: Talks and presentations › Conference presentations

Venture Cup Idea: BikePole
Jørgensen, T. M. (Participant)
25 Nov 2013
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

Venture Cup Idea: Diabuddy
Jørgensen, T. M. (Participant)
25 Nov 2013
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

**HS innovation: Workshop angående forebyggelse af højresvingsulykker**
Jørgensen, T. M. (Speaker)
19 Nov 2013
Activity: Other

**Hackathon 2013**
Jørgensen, T. M. (Invited speaker)
13 Nov 2013
Activity: Talks and presentations › Conference presentations

**Hackathon 2013**
Jørgensen, T. M. (Participant)
8 Nov 2013
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

**HS innovation: Innovations event angående forebyggelse af højresvingsulykker.**
Jørgensen, T. M. (Speaker)
23 Oct 2013
Activity: Other

**IDA ledelsesforum**
Jørgensen, T. M. (Participant)
27 Sep 2013
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

**Finansiering af biotek 2013**
Jørgensen, T. M. (Participant)
5 Feb 2013
Activity: Attending an event › Participating in or organising workshops, courses, seminars etc.

**STW (External organisation)**
Jørgensen, T. M. (Member)
1 Oct 2012 → 23 Oct 2012
Activity: Membership › Membership in review committee

**Nye OCT systemer**
Jørgensen, T. M. (Speaker)
11 Mar 2011
Activity: Talks and presentations › Conference presentations

**Press clippings:**

**Weekendavisen, 4. sektion: Laser: livsstråler**
Thomas Martini Jørgensen
31/03/2010
1 media contribution
Press / Media