How to foster a High-Tech entrepreneurial mind-set – A multidisciplinary engineering course for Bachelor students

General information
State: Published
Organisations: Department of Applied Mathematics and Computer Science, Statistics and Data Analysis, Department of Micro- and Nanotechnology, National Food Institute, Research Group for Microbial Biotechnology and Biorefining, Office for Study Programmes and Student Affairs, Department of Civil Engineering, Department of Management Engineering, Technology and Innovation Management
Authors: Rootzén, H. (Intern), Berg, R. H. (Intern), Hobley, T. J. (Intern), Andersson, P. H. (Intern), Yoshinaka, Y. (Intern), Jensen, L. B. (Intern)
Publication date: 2017
Main Research Area: Technical/natural sciences
Entrepreneurial mind-set, Multidisciplinary teams, Preparing professionals
Source: PublicationPreSubmission
Source-ID: 131137226
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 2017

Possibilities and barriers for e-learning in primary school in Denmark
How much are we using e-learning in primary school in Denmark? What are the barriers? What are the benefits? Why do we not use e-learning even more? These questions have been the focus for a one year national investigation conducted by ATV, The Danish Academy of Technical Sciences. The investigation included interviews with Danish researchers, persons from the ministry, teachers, students, and e-learning companies. The overall purpose was to make recommendations on how to accelerate the digital transformation of the Danish primary and high schools education system. In this paper, we combine some of the preliminary findings from the interviews with answers to a small questionnaire sent out to 19 Danish e-learning companies. We also add our own observations and visions for how e-learning could be used and which potentials we see for the near future. One major observation is that generally the attitudes to e-learning is positive: Denmark has political goals about access to machines, infrastructure, and internet at every school. There is dedicated substantial funding for schools buying e-learning material, and local successful e-learning companies such as Area9, EduLab, and Clio Online with international footprint and covering 90% of all schools in Denmark. Despite the many positive factors, which contribute to accelerating the use of e-learning, we also found others, which slow down the transformation: Lack of evidence of the benefits from e-learning tools, doubt about whether it is possible to gather evidence in learning, and higher demands for evidence for e-learning tools than for other educational tools. There is also a missing trust and missing communication among stakeholders. We also observed a lack of vision on how digitalization can go beyond "PDFing" a book, and, finally, we met a fear that using Big Data for personalization of the
teaching/learning process will be used to stereotype education, or will only be used to save costs

Fremtidens samfund mangler kvindelige professorer

Kvindekvoter er ligebehandling
Uden specielle tiltag for kvinder får mændene de største fordele.
Individualized Learning Through Non-Linear use of Learning Objects: With Examples From Math and Stat

Our aim is to ensure individualized learning that is fun, inspiring and innovative. We believe that when you enjoy, your brain will open up and learning will be easier and more effective. The methods use a non-linear learning environment based on self-contained learning objects which are pieced together by a Hyperbolic Graph, or by the students themselves. This learning system makes it easy for students to find a path through the course material which suits his/her personal learning style and which makes learning more motivating, and efficient, and which leads to better learning. The methods have been tested in two case studies. One was a continuing education course in statistics for a global medical company, and the other was a “big” - both in terms of the number of students and in the number of ECTS points - introductory course in mathematics at a major technical university. The continuing education course made it possible for the company’s employees, from many different parts of the company and from all around the world, to learn from the same course. For the university course we started with a pilot project where our methods were used during only one course week. The pilot was a success and we then used the experiences from it to reshape the entire course. This course has now been running for 5 years and consistently receives very good evaluations, both from students and teachers. A clear finding from the test cases is that our learning method creates more motivation and makes the students use more time on the course and prepare better for the lectures. An important discussing point is how much “free choice” is best for the learners. We believe that the possibility to follow your own learning style by choosing between different types of material is important and ensures better learning and more motivation for all students, and that for the best students it also gives courage to go beyond the curriculum.
Constraints on reusability of learning objects: Didactic aspects of modular e-Learning in engineering education

It is the aim of this paper to discuss some didactic constraints on the use and reuse of digital modular learning objects. Engineering education is used as the specific context of use with examples from courses in introductory electronics and mathematics. Digital multimedia and modular learning objects have been proclaimed as important elements in e-learning for a long time, and there are good reasons to believe in the benefits of interactive multimedia as well as flexible and modular learning objects. Nevertheless the use and reuse of learning objects on a large scale seems to be a slow success. Constraints on reuse arise from the nature of conceptual understanding in higher education and the functionality of learning objects within present technologies. We will need didactic as well as technical perspectives on learning objects in designing for understanding.
Strategies for Inverse Sampling from a Poisson distribution

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Holst, E. (Ekstern), Rootzen, H. (Intern)
Publication date: 2010

Host publication information
Title of host publication: Symposium i Anvendt Statistik 2010, Økonomisk Institut, Københavns Universitet
Main Research Area: Technical/natural sciences
Conference: København, Denmark, 01/01/2010
Source: orbit
Source-ID: 257527
Publication: Research › Article in proceedings – Annual report year: 2010

Why did the breast cancer lymph node status distribution improve in Denmark in the pre-mammography screening period of 1978-1994?

Background. Danish breast cancer patients diagnosed in 1978-1994 experienced a trend over time towards a more favourable distribution of lymph node status at time of diagnosis, which was not due to mammography screening. We investigated how this trend could be explained by patient characteristics at diagnosis: age (biological processes), calendar period (e.g. environmental changes), birth cohort (living conditions over a life time), post-menopausal status (a predictor of less favourable nodal status), and tumour diameter (a marker of detection time). Material and methods. The data set consisted of 22 955 patients aged 30-69 years at time of diagnosis with known lymph node status, known tumour diameter, known menopausal status, and clinically detected tumours, available from the Danish Breast Cancer Cooperative Group (DBCG). Age, period, cohort, menopausal status, and tumour diameter were used as predictors in generalised linear models with either node-positive status (at least one of the excised lymph nodes being tumour-positive) or severely node-positive status (at least half of the excised lymph nodes being tumour-positive) as outcomes. Lymph node status was assessed both empirically and estimated using an EM algorithm in order to reduce misclassification. Results and discussion. We found that the improved lymph node status distribution was most likely a period effect due to a combination of earlier detection of clinical tumours, explaining most of the trend in node-positive breast cancer and half of the trend in severely node-positive breast cancer, and some unknown factor affecting lymph node status but not necessarily other tumour characteristics.

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rostgaard, K. (Ekstern), Vaeth, M. (Ekstern), Rootzen, H. (Intern), Lynge, E. (Ekstern)
Pages: 313-321
Publication date: 2010
Main Research Area: Technical/natural sciences

Publication information
Journal: Acta Oncologica
Volume: 49
Issue number: 3
Hvorfor eliteuddannelse?

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics
Authors: Rootzen, H. (Intern), Lassen, J. K. (Intern), Landau, J. (Ekstern)
Publication date: 2009

Hvorfor eliteuddannelse?

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics
Authors: Rootzen, H. (Intern), Lassen, J. K. (Intern), Landau, J. (Ekstern)
Publication date: 2009
Statmaster and HEROS - web-based courses first and second generation

With the increasing focus on life-long learning, and with the convenience and accessibility of the Internet, the market for web-based courses has expanded vastly in recent times—in particular in connection with continuing education. However, teaching web-based courses presents various technical as well as pedagogical challenges. Some of these challenges are
addressed, and means to dealing with them are suggested. A second generation of web-based courses is comprised of learning objects, which allows for tailoring courses for specialized groups of students, and accommodate individualized learning. The concept of learning objects and how they are used to form new courses are discussed.

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics, University of Southern Denmark
Authors: Larsen, P. V. (Ekstern), Rootzen, H. (Intern)
Publication date: 2008

Host publication information
Title of host publication: ECMI 2008
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228354
Publication: Research › Article in proceedings – Annual report year: 2008

Web based courses - reaching a distributed audience

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics, Lappeenranta University of Technology
Authors: Heilio, M. (Ekstern), Rootzen, H. (Intern)
Publication date: 2008

Host publication information
Title of host publication: ECMI 2008
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228355
Publication: Research › Article in proceedings – Annual report year: 2008

What happens if we use transformations in statistics? - An overview

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling, Holstat Consulting
Authors: Holst, E. (Ekstern), Rootzen, H. (Intern)
Pages: 1-13
Publication date: 2008

Host publication information
Title of host publication: Symposium i Anvendt Statistik 2008
Publisher: Copenhagen Business School
Main Research Area: Technical/natural sciences
Conference: Denmark, 01/01/2008
Source: orbit
Source-ID: 228540
Publication: Research - peer-review › Article in proceedings – Annual report year: 2008

Learning objects and blended learning in web-supported education

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rootzen, H. (Intern)
Publication date: 2007
Event: Abstract from 6th International Congress on Industrial and Applied Mathematics, Zurich, Switzerland.
Main Research Area: Technical/natural sciences
Source: orbit
Learning Statistics - in a WEB-based and non-linear way

Have you thought about why most teaching is linear? Do you know what non-linear learning means? Do you use web-based learning? And have you ever thought of combining web-based learning with “standard” university teaching such as lectures, problem based learning etc.? Students nowadays are very different from one another. They have different prior knowledge and different learning styles so it is a challenging task to teach them all in the same way. Furthermore the world of statistics has become so huge that it is impossible to cover everything. The structure imposed by the Bologna agreement gives a greater mobility which is good for both the students and the universities but leads to even more “inhomogeneity” at the courses. One possible solution is to combine traditional university teaching with web-based learning organized by using learning objects in a non-linear way. This means that the students can design the course – or a part of the course – so that it fits their individual learning style and their prior knowledge. Some prefer to look at examples first and afterwards look at which theories it is based on. Others want to do it the opposite way. Some wants to work with the problem themselves at first, then look at some pictures which show the essential parts and then read a text or listen to a spoken explanation. There are many possibilities – only your fantasy limits you. Learning objects are easy to modify (in contrast to writing a new book) and it is easy to use learning objects made by others and in this way make the job as a teacher both easier and more fun.

Of course the non-linear way of organizing learning objects can also be used in stand-alone web-based courses and in many other contexts as e.g. in school education and continuing education.

Statistical intervals - basic theory and examples

Statistical intervals - basic theory and examples
Do changes in lymph node status distribution explain trends in survival of breast cancer patients in Denmark?

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rostgaard, K. (Ekstern), Væth, M. (Ekstern), Rootzen, H. (Intern), Mouridsen, H. (Ekstern), Olesen, K. P. (Ekstern), Lynge, E. (Ekstern)
Pages: 398-404
Publication date: 2006
Main Research Area: Technical/natural sciences

Publication information
Journal: European Journal of Cancer Prevention
Volume: 15
Issue number: 5
ISSN (Print): 0959-8278
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.964 SNIP 0.769 CiteScore 2.17
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 1.306 SNIP 0.9 CiteScore 2.49
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 1.211 SNIP 0.963 CiteScore 2.56
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.077 SNIP 0.909 CiteScore 2.55
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.794 SNIP 0.909 CiteScore 2.97
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.851 SNIP 1.066 CiteScore 2.4
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.807 SNIP 0.994
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.742 SNIP 0.902
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.704 SNIP 0.761
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.827 SNIP 0.974
Stochastic modelling of dissolved inorganic nitrogen in space and time

Environmental monitoring datasets often contain a large amount of missing values, and are characterized as being sampled over time on a distinct number of locations in the area of interest. This paper proposes a stochastic approach for modelling such data in space and time, by taking the spatial and temporal correlations in data into account. It has been applied to observations of dissolved inorganic nitrogen in the Kattegat during the period 1993-1997. Modelling results are shown as maps of the spatial distribution of dissolved inorganic nitrogen (DIN) in 4 weeks, representing the four seasons, and as time series of DIN at three different locations. However, the model approach could be applied to any space-time point given by a location in the Kattegat area and a week in the 5-year period 1993-1997. The results can be interpreted from a biological and physical point of view. Thus for the specific application the approach seems to perform very well. The results obtained could be used to improve status reporting of the environment, or as forcing functions for time series models and deterministic, hydrodynamic ecosystem models.
Symposium i Anvendt Statistik

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling, Danmarks Statistik
Publication date: 2006

Publication information
Publisher: Danmarks Statistik og Informatics and Mathematical Modelling, Technical University of Denmark, DTU
Original language: Danish
Main Research Area: Technical/natural sciences
Source-ID: 228046
Publication: Research - peer-review › Book – Annual report year: 2006

Continuing Education in Statistics: A programme based on Learning Objects and Blended Learning

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rootzen, H. (Intern)
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: MSOR Communications
Volume: 5
Issue number: 3
Original language: English
Source-ID: 228003
Publication: Research › Journal article – Annual report year: 2005

Design of environmental monitoring programs - choosing sampling locations

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Department of Environmental Science and Engineering
Authors: Lophaven, S. N. (Intern), Carstensen, N. J. (Intern), Rootzen, H. (Intern)
Number of pages: 72
Publication date: 2005

Host publication information
Title of host publication: The International Conference on Quantitative Methods for the Environmental|Sciences and|General Meeting of TIES, Beijing
Main Research Area: Technical/natural sciences
Conference: The International Conference on Quantitative Methods for the Environmental|Sciences and|General Meeting of TIES, Beijing, 01/01/2005
Links:
Flexible and targeted Statistics Programme Based on Learning Objects and Blended Learning

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rootzen, H. (Intern)
Pages: 9-10
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: ECMI Newsletter
Volume: 37
Original language: English
Source: orbit
Source-ID: 228004
Publication: Research › Journal article – Annual report year: 2005

Fysisk aktivitet blandt unge i Danmark - statistisk analyse af faktorer for unges risikoadfærd

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Andersen, H. S. (Ekstern), Rootzen, H. (Intern)
Publication date: 2005

Host publication information
Title of host publication: 27. Symposium i Anvendt Statistik, Økonomisk Institut, SDU
Main Research Area: Technical/natural sciences
Conference: Odense, Denmark, 01/01/2005
Links:
http://www2.imm.dtu.dk/pubdb/p.php?3512
Source: orbit
Source-ID: 185662
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

How to fit professional development into our busy lives: Continuing education voucher systems

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Rootzen, H. (Intern)
Publication date: 2005

Host publication information
Title of host publication: Fifth Annual Meeting of ENBIS
Main Research Area: Technical/natural sciences
Links:
http://www2.imm.dtu.dk/pubdb/p.php?4346
Source: orbit
Source-ID: 185743
Publication: Research - peer-review › Article in proceedings – Annual report year: 2005

Hvordan sammenligner man to målemetoder? - Nogle grundlæggende betragtninger

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
I en verden med mænd og matematik: Helle for at forsk i tal

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Andersen, M. (Ekstern), Rootzen, H. (Intern)
Publication date: 2005
Main Research Area: Technical/natural sciences

Publication information
Journal: FEMINA
Original language: Danish
Source: orbit
Source-ID: 228123
Publication: Communication › Journal article – Annual report year: 2005

Space-Time Modeling of Environmental Monitoring Data

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Department of Environmental Science and Engineering, Mathematical Statistics
Authors: Lophaven, S. N. (Intern), Carstensen, N. J. (Intern), Rootzen, H. (Intern)
Pages: 237-256
Publication date: 2004
Main Research Area: Technical/natural sciences

Publication information
Journal: Environmental and Ecological Statistics
Volume: 11
Issue number: 3
Ratings:
Web of Science (2018): Indexed yes
Web of Science (2017): Indexed yes
Scopus rating (2016): CiteScore 0.82 SNIP 0.569 SJR 0.437
Scopus rating (2015): CiteScore 0.73 SNIP 0.594 SJR 0.454
Scopus rating (2014): CiteScore 1.1 SNIP 0.856 SJR 0.768
Scopus rating (2013): CiteScore 1.03 SNIP 0.853 SJR 0.49
Scopus rating (2012): CiteScore 1.18 SNIP 1.115 SJR 0.404
Scopus rating (2011): CiteScore 1.29 SNIP 1.065 SJR 0.729
Scopus rating (2010): SNIP 1.122 SJR 0.756
Scopus rating (2009): SNIP 0.537 SJR 0.448
Scopus rating (2008): SNIP 0.784 SJR 0.547
Scopus rating (2007): SNIP 0.754 SJR 0.498
Scopus rating (2006): SNIP 1.094 SJR 0.68
Scopus rating (2005): SNIP 1.007 SJR 0.92
Scopus rating (2004): SNIP 0.772 SJR 0.481
Scopus rating (2003): SNIP 0.375 SJR 0.242
Correlation of Cadmium Distribution Coefficients to Soil Characteristics

Cadmium (Cd) distribution between the soil solid phase and the soil solution is a key issue in assessing the environmental effect of Cd in the terrestrial environmental. Previous studies have shown that many individual minerals and other components found in soils can bind Cd, but most studies on whole soil samples have shown that pH is the main parameter controlling the distribution. To identify further the components that are important for Cd binding in soil we measured Cd distribution coefficients (K_d) at two fixed pH values and at low Cd loadings for 49 soils sampled in Denmark. The K_d values for Cd ranged from 5 to 3000 L kg\(^{-1}\). The soils were described pedologically and characterized in detail (22 parameters) including determination of contents of the various minerals in the clay fraction. Correlating parameters were grouped and step-wise regression analysis revealed that the organic carbon content was a significant variable at both pH values. Cation exchange capacity (CEC) and gibbsite were important at the low pH (5.3) while iron oxides also were important at the high pH (6.7). None of the other clay minerals present in the soils (illite, smectite, kaolinite, hydroxy interlayered clay minerals [HIM], chlorite, quartz, microcline, plagioclase) were significant in explaining the Cd distribution coefficient.

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Department of Environmental Engineering
Authors: Holm, P. E. (Intern), Rootzen, H. (Intern), Borggaard, O. K. (Ekstern), Maberg, J. P. (Ekstern), Christensen, T. H. (Intern)
Pages: 138-145
Publication date: 2003
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Environmental Quality
Volume: 32
Issue number: 1
ISSN (Print): 0047-2425
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 2.51 SJR 1.049 SNIP 1.15
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 1.255 SNIP 1.204 CiteScore 2.69
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 2
Scopus rating (2014): SJR 1.274 SNIP 1.271 CiteScore 2.66
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 2
Scopus rating (2013): SJR 1.318 SNIP 1.275 CiteScore 2.7
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 2
Scopus rating (2012): SJR 1.371 SNIP 1.22 CiteScore 2.51
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 2
Space-time modeling of dissolved inorganic nitrogen

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Lophaven, S. N. (Intern), Carstensen, N. J. (Intern), Rootzen, H. (Intern)
Pages: 749-750
Publication date: 2003

Host publication information
Title of host publication: Bulletin of the International Statistical Institute 54th Session, Contributed Papers
Publisher: International Statistical Institute
Main Research Area: Technical/natural sciences
Links:
Source: orbit
Source-ID: 58540
Publication: Research - peer-review › Article in proceedings – Annual report year: 2003

Geostatistik

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Lophaven, S. N. (Intern), Rootzen, H. (Intern)
Pages: 85-94
Methods for estimating the semivariogram

Modelling spatial variability, typically in terms of the semivariogram, is of great interest when the objective is to compute spatial predictions of parameters measured in space. Such parameters could be rainfall, temperature or concentrations of polluting agents in aquatic environments. In the existing literature various methods for modelling the semivariogram have been proposed, while only a few studies have been made on comparing different approaches. In this paper we compare eight approaches for modelling the semivariogram, i.e. six approaches based on least squares estimation of an experimental semivariogram, as well as maximum likelihood and restricted maximum likelihood estimation. The comparison is made by simulating spatial data with a known covariance structure, and comparing the "true" parameters with those computed. The comparison showed that maximum likelihood and restricted maximum likelihood performed better than the least squares approaches. We also applied maximum likelihood and least squares estimation to a real dataset, containing measurements of salinity at 71 sampling stations in the Kattegat basin. This showed that the calculation of spatial predictions is insensitive to the choice of estimation method, but also that the uncertainties of predictions were reduced when applying maximum likelihood.

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Lophaven, S. N. (Intern), Carstensen, N. J. (Intern), Rootzen, H. (Intern)
Pages: 128-144
Publication date: 2002
Host publication information
Title of host publication: Symposium i Anvendt Statistik
Publisher: Institut for Informationsbehandling, Handelshøjskolen i Århus
Main Research Area: Technical/natural sciences
Links:
Source: orbit
Source-ID: 58187
Publication: Research - peer-review › Article in proceedings – Annual report year: 2002
A Modified Nottingham Prognostic Index for Breast Cancer Patients Diagnosed in Denmark 1978-1994

Stage of disease is a predictor of breast cancer survival. We used data from the Danish Cancer Register and the Danish Breast Cancer Cooperative Group to study stage distribution in 0-69-years-old Danish breast cancer patients diagnosed in 1978-1994. We constructed a modified Nottingham Prognostic Index (NPI) calculated from the number of excised and positive lymph nodes, malignancy grade and tumor diameter. This NPI could be calculated for 63% of the patients, and among these the stage distribution improved during the study period. The proportion of patients with a poor prognostic score decreased from 27% to 20%. Based on a comparison of the crude 3-year survival of patients with an NPI score and those without, it seems probable that the stage of disease at diagnosis on average improved in Danish breast cancer patients below age 70 during the 1980s and the early 1990s.
Improving Drug Therapy for Patients with Asthma Part 2: Use of Antiasthma Medications

**General information**

State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Herborg, H. (Ekstern), Søndergaard, B. (Ekstern), Jørgensen, T. (Ekstern), Fonnesbæk, L. (Ekstern), Hepler, C. D. (Ekstern), Holst, H. (Intern), Frøkjær, B. (Ekstern)
Pages: 551-559
Publication date: 2001
Main Research Area: Technical/natural sciences

**Publication information**
Journal: Journal of the American Pharmacists Association
Volume: 41
Issue number: 4
ISSN (Print): 1086-5802
Original language: English
Source: orbit
Source-ID: 57797
Publication: Research - peer-review › Journal article – Annual report year: 2001

**Lateral gas transport in soil adjacent to an old landfill: factors governing emissions and methane oxidation**

Field investigations of lateral gas transport and subsequent emissions in soil adjacent to an old landfill in Denmark have been conducted during a one-year period. A significant seasonal variation in the emissions with high carbon dioxide and low methane fluxes in the summer (May to October) was observed. This was attributed to methane oxidation. Diurnal measurements during a drop in barometric pressure showed that the fluxes of landfill gas changed dramatically within a very short time. The concentrations and the soil moisture content in the upper part of the soil profile had significant influence on the fluxes, as did the distance from the landfill border, temperature, barometric pressure and the pressure gradient. Statistical analyses proved that soil moisture described the largest part of the variation. No methane at all emitted during the summer. Calculations and isotope analyses showed that very high fractions of the laterally migrating...
methane were oxidised.

**General information**
State: Published
Organisations: Department of Environmental Engineering, Department of Informatics and Mathematical Modeling
Authors: Christoffersen, M. (Intern), Kjeldsen, P. (Intern), Hoist, H. (Intern), Chanton, J. (Ekstern)
Pages: 595-612
Publication date: 2001
Main Research Area: Technical/natural sciences

**Publication information**
Journal: Waste Management and Research
Volume: 19
Issue number: 6
ISSN (Print): 0734-242X
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): CiteScore 1.76 SJR 0.655 SNIP 1.036
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.617 SNIP 0.899 CiteScore 1.53
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.741 SNIP 1.085 CiteScore 1.28
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.588 SNIP 0.951 CiteScore 1.17
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.886 SNIP 1.046 CiteScore 1.4
ISI indexed (2012): ISI indexed yes
Web of Science (2012): Indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.027 SNIP 0.865 CiteScore 1.33
ISI indexed (2011): ISI indexed yes
Web of Science (2011): Indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.666 SNIP 0.975
Web of Science (2010): Indexed yes
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.877 SNIP 1.257
Web of Science (2009): Indexed yes
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.49 SNIP 0.933
Web of Science (2008): Indexed yes
Scopus rating (2007): SJR 0.352 SNIP 0.666
Web of Science (2007): Indexed yes
Scopus rating (2006): SJR 0.295 SNIP 0.755
Web of Science (2006): Indexed yes
Scopus rating (2005): SJR 0.449 SNIP 0.729
Web of Science (2005): Indexed yes
Scopus rating (2004): SJR 0.48 SNIP 0.787
Reconstruction af data from the Action Plan on the Aquatic Environment

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Lophaven, S. N. (Intern), Carstensen, N. J. (Intern), Rootzen, H. (Intern)
Pages: 239-251
Publication date: 2001

Host publication information
Title of host publication: Symposium i Anvendt Statistik, Økonomisk Institut, Københavns Universitet og Danmarks Statistik
Main Research Area: Technical/natural sciences
Links:
Source: orbit
Source-ID: 57853
Publication: Research - peer-review › Article in proceedings – Annual report year: 2001

Do clinical databases render population-based cancer registers obsolete?: The example of breast cancer in Denmark

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rostgaard, K. (Ekstern), Holst, H. (Intern), Mouridsen, H. T. (Ekstern), Lynge, E. (Ekstern)
Pages: 669-674
Publication date: 2000
Main Research Area: Technical/natural sciences

Publication information
Journal: Cancer Causes and Control
Volume: 11
Original language: English
Source: orbit
Source-ID: 176430
Publication: Research - peer-review › Journal article – Annual report year: 2000

The influence of design characteristics on statistical inference in nonlinear estimation: A simulation study based on survival data and hazard modeling

General information
State: Published
Continuous ecotoxicological data evaluated relative to a control response

State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics, Department of Environmental Engineering, Department of Environmental Science and Engineering
Authors: Andersen, J. S. (Intern), Holst, H. (Intern), Spliid, H. (Intern), Andersen, H. (Intern), Baun, A. (Intern), Nyholm, N. (Intern)
Pages: 405-420
Publication date: 1998
Main Research Area: Technical/natural sciences

Publication information
Journal: Journal of Agricultural, Biological, and Environmental Statistics
Volume: 3
Issue number: 4
ISSN (Print): 1085-7117
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.802 SNIP 0.83 CiteScore 1
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.467 SNIP 0.629 CiteScore 0.81
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.694 SNIP 0.85 CiteScore 1.18
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.68 SNIP 0.54 CiteScore 0.97
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 0.645 SNIP 0.759 CiteScore 1.38
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 0.603 SNIP 0.908 CiteScore 0.88
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 0.67 SNIP 0.748
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 0.514 SNIP 0.831
BFI (2008): BFI-level 1
Scopus rating (2008): SJR 0.768 SNIP 0.895
Examination of reproducibility in microbiological degradation experiments

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics, Department of Environmental Engineering
Authors: Sommer, H. M. (Intern), Spliid, H. (Intern), Holst, H. (Intern), Arvin, E. (Intern)
Pages: 65-82
Publication date: 1998
Main Research Area: Technical/natural sciences

Publication information
Journal: Biodegradation
Volume: 9
Issue number: 1
ISSN (Print): 0923-9820
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.804 SNIP 1.069 CiteScore 2.41
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.888 SNIP 1.055 CiteScore 2.37
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.968 SNIP 1.195 CiteScore 2.42
Web of Science (2014): Indexed yes
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 1.103 SNIP 1.435 CiteScore 2.63
ISI indexed (2013): ISI indexed yes
BFI (2012): BFI-level 1
Scopus rating (2012): SJR 1.113 SNIP 1.213 CiteScore 2.22
ISI indexed (2012): ISI indexed yes
BFI (2011): BFI-level 1
Scopus rating (2011): SJR 1.052 SNIP 1.102 CiteScore 2.31
ISI indexed (2011): ISI indexed yes
BFI (2010): BFI-level 1
Scopus rating (2010): SJR 1.096 SNIP 0.991
BFI (2009): BFI-level 1
Scopus rating (2009): SJR 1.009 SNIP 1.208
Manual for ConBio Tox - Statistical treatment of data from biotests with continuous response

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Mathematical Statistics
Authors: Andersen, J. S. (Intern), Holst, H. (Intern)
Publication date: 1998

Publication information
Publisher: Informatics and Mathematical Modelling, Technical University of Denmark, DTU
Original language: English
Series: Technical Report - Informatics and Mathematical Modelling, DTU
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228053
Publication: Research - Report – Annual report year: 1998

Statistisk analyse af brystkraftpatienter i DBCG

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern), Jensen, M. (Ekstern), Mouridsen, H. (Ekstern)
Publication date: 1998

Host publication information
Title of host publication: Symposium i Anvendt Statistik : Århus Universitet
Main Research Area: Technical/natural sciences
Conference: Denmark, 01/01/1998
Source: orbit
Source-ID: 228015
Publication: Research - peer-review › Article in proceedings – Annual report year: 1998

Stigende incidens af klumpfod i Frederiksborg Amt.

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling, Hillerød Sygehus
Correlating phospholipid fatty acids (PLFA) in a landfill leachate polluted aquifer with biogeochemical factors by multivariate statistical methods

Different multivariate statistical analyses were applied to phospholipid fatty acids representing the biomass composition and to different biogeochemical parameters measured in 37 samples from a landfill contaminated aquifer at Grindsted.
Landfill (Denmark). Principal component analysis and correspondence analysis were used to identify groups of samples showing similar patterns with respect to biogeochemical variables and phospholipid fatty acid composition. The principal component analysis revealed that for the biogeochemical parameters the first principal component was linked to the pollution effect and to redox processes and the second principal component described the geological and geochemical features of the samples. Dependent on the data transformation of the phospholipid fatty acid profiles in either absolute concentrations (logarithm transformed) or in mol% of total phospholipid fatty acids, different groups of samples and outliers were revealed by the principal component analysis. The principal component analysis on data in absolute concentrations revealed that many phospholipid fatty acids reflected the pollution effect on the biomass composition. In contrast, the phospholipid fatty acids in mol% divided the samples into one group of the more polluted samples and another with the nearly unpolluted samples. The important phospholipid fatty acids for this grouping were mainly a few of the normal saturated phospholipid fatty acids (10:0, 16:0 and 18:0). Discriminant analysis was used to allocate samples of phospholipid fatty acids into predefined classes. A large percentages of samples were classified correctly when discriminating samples into groups of dissolved organic carbon and specific conductivity, indicating that the biomass is highly influenced by the pollution. In contrast, the discriminant analysis revealed that on the basis of the profiles of phospholipid fatty acids no good discrimination between samples showing dominant sulfate reduction and dominant iron reduction could be made, nor between samples showing dominant nitrate reduction and aerobic respiration. Partial least square analysis related the phospholipid fatty acids data to the biogeochemical parameters assuming linear relationships. After selection of the optimal phospholipid fatty acid combination by genetic algorithms, good partial least squares models with low prediction errors were gained primarily between the biogeochemical parameters describing total contents of carbon, pH and chloride. The models predicting specific activity in terms of, e.g., sulfate reduction activity in a sample had relatively higher prediction errors and low correlation coefficients. This indicates that the phospholipid fatty acid profiles from complex habitats have limited value for identifying more specific microbial populations.
Local fitting of autoregressive models with external input

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Pages: 175-188
Publication date: 1997

Host publication information
Title of host publication: Symposium i anvendt statistik
Main Research Area: Technical/natural sciences
Conference: Lyngby, Denmark, 01/01/1997
Source: orbit
Source-ID: 200495
Publication: Research › Article in proceedings – Annual report year: 1997

Multivariate calibration - chlorophyll flouroscens measurements

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Andersen, J. S. (Intern), Holst, H. (Intern), Lauritzen, M. D. (Ekstern)
Pages: 105-115
Publication date: 1997

Host publication information
Title of host publication: Anvendt Kemometri
Main Research Area: Technical/natural sciences
Conference: Anvendt Kemometri, 01/01/1997
Source: orbit
Source-ID: 199943
Publication: Research - peer-review › Article in proceedings – Annual report year: 1997

Symposium i Anvendt Statistik

General information
A statistical approach regarding the performance of sensory panels trained to assess perceived air quality.

General information
State: Published
Organisations: Department of Energy Engineering, Indoor Environment, Department of Mechanical Engineering, Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Groes, A. L. (Intern), Pejtersen, J. (Intern), Langkilde, G. (Intern), Holst, H. (Intern)
Pages: 80-91
Publication date: 1996

Host publication information
Title of host publication: Proceedings, Publication 188
Place of publication: Milan
Publisher: CIB
Main Research Area: Technical/natural sciences
Conference: CIB Proceedings, Publication 188, 01/01/1995
Source: orbit
Source-ID: 164831
Publication: Research - peer-review › Article in proceedings – Annual report year: 1996

Characteristics of dose-response curves, describing serially correlated continuous ecotoxicological data

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Andersen, J. S. (Intern), Holst, H. (Intern)
Publication date: 1996
Event: Abstract from Proceedings of 16th Nordic Conference on Mathematical Statistics,
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 200538
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 1996

Comparison of NEC and "low effect" EC-values

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Andersen, J. S. (Intern), Holst, H. (Intern)
Number of pages: 14
Publication date: 1996

Host publication information
Title of host publication: Symposium i Anvendt Statistik
Publisher: Odense
Main Research Area: Technical/natural sciences
Conference: Odense, Denmark, 01/01/1996
Source: orbit
Source-ID: 199944
Publication: Research - peer-review › Article in proceedings – Annual report year: 1996
Analysis of Algal Toxicity Test Data

General information
State: Published
Organisations: Department of Environmental Science and Engineering, Department of Informatics and Mathematical Modeling
Authors: Nyholm, N. (Intern), Holst, H. (Intern)
Publication date: 1995

Host publication information
Title of host publication: Asking the Right Questions: Ecotoxicity and Statistics
Place of publication: London
Publisher: SETAC-Europe
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 200151
Publication: Research - peer-review › Article in proceedings – Annual report year: 1995

New developments in algal toxicity test methodology

General information
State: Published
Organisations: Environmental Chemistry, Department of Environmental Engineering, Department of Environmental Science and Engineering, Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Nyholm, N. (Intern), Halling-Sørensen, B. (Intern), Jensen, S. (Ekstern), Holst, H. (Intern), Peterson, H. (Ekstern)
Publication date: 1995
Event: Abstract from SETAC World Conference, .
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228044
Publication: Research - peer-review › Conference abstract for conference – Annual report year: 1995

Non-linear parameter estimation in microbiologic degradation systems and statistic test for common estimation

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling, Department of Environmental Engineering
Authors: Sommer, H. M. (Ekstern), Holst, H. (Intern), Spliid, H. (Intern), Arvin, E. (Intern)
Pages: 551-556
Publication date: 1995
Main Research Area: Technical/natural sciences

Publication information
Journal: Environment International
Volume: 21
Issue number: 5
ISSN (Print): 0160-4120
Ratings:
BFI (2018): BFI-level 2
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 2
Web of Science (2017): Indexed yes
BFI (2016): BFI-level 2
Scopus rating (2016): CiteScore 7.33 SJR 2.465 SNIP 2.389
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 2
Scopus rating (2015): SJR 2.577 SNIP 2.129 CiteScore 6.49
Web of Science (2015): Indexed yes
Comparison of Soxhlet and Shake Extraction of Polycyclic Aromatic Hydrocarbons from Coal Tar Polluted Soils Sampled in the Field

This study compares three extraction methods for PAHs in coal tar polluted soil: 3-times repeated shaking of the soil with dichloromethane-methanol (1:1), Soxhlet extraction with dichloromethane, and Soxhlet extraction with dichloromethane followed by Soxhlet extraction with methanol. The extraction efficiencies were determined for ten selected PAHs in triplicate samples of six soils sampled at former gasworks sites. The samples covered a wide range of PAH concentrations, from 0.6 to 397 mg/kg soil. Soxhlet extraction with dichloromethane followed by Soxhlet extraction with methanol, in general, was the most efficient method yielding 30 to 50 % higher concentrations than the other methods.
Kontrol af renset jord

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Publication date: 1993

Host publication information
Title of host publication: Vejledninger om renset jord, ATV
Main Research Area: Technical/natural sciences
Conference: Vejledninger om renset jord, ATV, 01/01/1993
Source: orbit
Source-ID: 228034
Publication: Research › Article in proceedings – Annual report year: 1993

Non-linear parameter estimation in microbiologic degradation systems and statistic test for common estimation

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling, Department of Environmental Engineering
Authors: Sommer, H. M. (Intern), Holst, H. (Intern), Spliid, H. (Intern), Arvin, E. (Intern)
Publication date: 1993

Publication information
Publisher: Informatics and Mathematical Modelling, Technical University of Denmark, DTU
Original language: English
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 201038
Publication: Research - peer-review › Report – Annual report year: 1993

Non-linear parameter estimation in microbiologic degradation systems and statistic test for common estimation

General information
State: Published
Organisations: National Food Institute, Mathematical Statistics, Department of Informatics and Mathematical Modeling, Urban Water Engineering, Department of Environmental Engineering
Authors: Sommer, H. M. (Intern), Holst, H. (Intern), Spliid, H. (Intern), Arvin, E. (Intern)
Publication date: 1993

Host publication information
Title of host publication: Proceedings of the International Congress on Modelling and Simulation
Main Research Area: Technical/natural sciences
Conference: The International Congress on Modelling and Simulation, Perth, Australia, 01/01/1993
Source: orbit
Source-ID: 228032
Publication: Research - peer-review › Article in proceedings – Annual report year: 1993

Sampling founded on historical knowledge and statistical methods

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Number of pages: 13
Publication date: 1993

Host publication information
Title of host publication: Forurenset Grunn: Prøvetakning, Analyser, Risikovurderinger SFT/ATV
Main Research Area: Technical/natural sciences
Comparison of different calibration methods suited for calibration problems with many variables

This paper describes and compares different kinds of statistical methods proposed in the literature as suited for solving calibration problems with many variables. These are: principal component regression, partial least-squares, and ridge regression. The statistical techniques themselves do not provide robust results in the spirit of calibration equations which can last for long periods. A way of obtaining this property is by smoothing and differentiating the data. These techniques are considered, and it is shown how they fit into the treated description.

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Pages: 1780-1784
Publication date: 1992
Main Research Area: Technical/natural sciences

Publication information
Journal: Applied Spectroscopy
Volume: 46
Issue number: 12
ISSN (Print): 0003-7028
Ratings:
BFI (2018): BFI-level 1
Web of Science (2018): Indexed yes
BFI (2017): BFI-level 1
Web of Science (2017): Indexed Yes
BFI (2016): BFI-level 1
Scopus rating (2016): SJR 0.48 SNIP 0.967 CiteScore 1.76
Web of Science (2016): Indexed yes
BFI (2015): BFI-level 1
Scopus rating (2015): SJR 0.649 SNIP 1.09 CiteScore 1.96
Web of Science (2015): Indexed yes
BFI (2014): BFI-level 1
Scopus rating (2014): SJR 0.619 SNIP 1.077 CiteScore 1.96
BFI (2013): BFI-level 1
Scopus rating (2013): SJR 0.627 SNIP 1.162 CiteScore 2.08
ISI indexed (2013): ISI indexed yes
Web of Science (2013): Indexed yes
BFI (2012): BFI-level 1
Comparison of different methods suited for calibration problems with many variables

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Number of pages: 19
Publication date: 1992

Publication Information
Publisher: Informatics and Mathematical Modelling, Technical University of Denmark, DTU
Original language: English

Series: Technical Reports - Informatics and Mathematical Modelling, DTU
Number: 7
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228055
Publication: Research - peer-review › Report – Annual report year: 1992
Modelling the growth of methane-oxidizing bacteria in a fixed biofilm

Methane-oxidizing bacteria were grown in a fixed biofilm reactor in order to study their ability to degrade chlorinated aliphatic hydrocarbons. Focus is on the growth behaviour of the mixed culture. The growth is described by a model that includes methanotrophic bacteria in the active biomass fraction. The inactive biomass fraction consists of exocellular polymers and biodegradable and inert particulate biomass. The model describes the oxygen respiration in detail. Yield coefficients, decay constants and hydrolysis constants are estimated based on the oxygen respiration. An analysis of the observability of the system reveals that several of the coefficients cannot be determined explicitly due to the complexity of the model and the limited amount of variables measured. Estimation procedures based on least squares methods are employed and parameter estimates and confidence intervals are computed. The study forms the basis for setting up a future measuring programme. This work indicates a yield coefficient for methanotrophs of 0.36 mg biomass COD per mg CH₄. In weight units this corresponds to approx. 1.44 mg biomass per mg CH₄. This is close to the theoretical maximum growth yield for methanotrophs.
A program for estimation of kinetic parameters in a biodegradation model and a systematic approach to the design of experiments

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling, Department of Environmental Engineering
Authors: Bilbo, C. M. (Ekstern), Spliid, H. (Intern), Arvin, E. (Intern), Holst, H. (Intern)
Publication date: 1991

Publication information
Publisher: Informatics and Mathematical Modelling, Technical University of Denmark, DTU
Original language: English
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 200883
Publication: Research - peer-review › Report – Annual report year: 1991

Jordprøvetagning på forurenede grunde: Strategier, metoder og håndtering

General information
State: Published
Organisations: Department of Environmental Science and Engineering, Department of Informatics and Mathematical Modeling, COWI Consultants A/S, Miljøkemi, Akademiet for de Tekniske Videnskaber
Authors: Kjeldsen, P. (Intern), Holst, H. (Intern), Kaalund, L. (Ekstern), Simonsen, Y. (Ekstern), Vendelboe, N. (Ekstern)
Number of pages: 174
Publication date: 1991

Publication information
Publisher: Lossepladsprojektets sekretariat
Statistical Methods for planning of experiments and evaluation of results: Soil and Groundwater Cleaning

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Publication date: 1991

Publication information
Publisher: BIOMEC DK
Original language: English
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228056
Publication: Research - peer-review › Report – Annual report year: 1991

Analysis of interactions in a multicomponent system

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling, Department of Environmental Engineering
Authors: Bilbo, C. M. (Ekstern), Spliid, H. (Intern), Arvin, E. (Intern), Holst, H. (Intern)
Publication date: 1990

Publication information
Publisher: Informatics and Mathematical Modelling, Technical University of Denmark, DTU
Original language: English
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 200884
Publication: Research - peer-review › Report – Annual report year: 1990

Enheds- og totalmængder i dagrenovation fra private husstande

General information
State: Published
Organisations: Department of Informatics and Mathematical Modeling
Authors: Rootzen, H. (Intern)
Publication date: 1990

Publication information
Publisher: Miljøstyrelsen
Original language: Danish
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 200931
Publication: Research - peer-review › Report – Annual report year: 1990

Statistical analysis of growth in biological systems

General information
Statistical analysis of growth in biological systems

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Bilbo, C. M. (Ekstern), Spliid, H. (Intern), Holst, H. (Intern)
Publication date: 1990

Beskrivende statistik

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Pages: 1-10
Publication date: 1989

Principal komponent analyse: En metode til reduktion af store datamængder

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Rootzen, H. (Intern)
Publication date: 1989

Multivariabel lineær kalibrering med mange variable. Et eksempel fra foderstofindustrien

General information
Statistik behandling af nær infrarøde reflektionsmålere

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Holst, H. (Intern)
Number of pages: 340
Publication date: 1988

Publication information
Original language: Danish
Series: IMM-PHD-1988-52
Main Research Area: Technical/natural sciences
Source: orbit
Source-ID: 228052
Publication: Research › Ph.D. thesis – Annual report year: 1988

Über eine stetigkeitsfrage betreffend das bedienungssystem GI/GI/s

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Asmussen, S. (Ekstern), Johansen, H. (Intern)
Number of pages: 14
Publication date: 1985

Publication information
Volume: 22
Issue number: 10/11
Original language: English
Source: orbit
Source-ID: 228014
Publication: Research - peer-review › Journal article – Annual report year: 1985

Über eine stetigkeitsfrage betreffend das bedienungssystem GI/GI/s

General information
State: Published
Organisations: Mathematical Statistics, Department of Informatics and Mathematical Modeling
Authors: Asmussen, S. (Ekstern), Johansen, H. (Intern)
Number of pages: 565-570
Publication date: 1985

Publication information
Publisher: Institute of Mathematical Statistics, University of Copenhagen
Original language: German
Main Research Area: Technical/natural sciences
Projects:

**Smart innovation - Learningbank: Learning using VR**
Digital Learning
Department of Applied Mathematics and Computer Science
Statistics and Data Analysis
Learningbank
Period: 01/09/2017 → …
Number of participants: 2
Project participant:
Thyregod, Camilla (Intern)
Rootzén, Helle (Intern)

**Strengthen ISS Global A/S before negotiations through data analysis on Fleet LSI data**
Department of Applied Mathematics and Computer Science
Statistics and Data Analysis
Period: 01/01/2017 → 06/07/2017
Number of participants: 3
Other:
Samsøe, Pernille Lindvang (Ekstern)
Supervisor:
Thyregod, Camilla (Intern)
Main Supervisor:
Rootzén, Helle (Intern)

**Student based learning in multi-facetted learning communities**
Department of Applied Mathematics and Computer Science
Statistics and Data Analysis
Period: 01/09/2015 → 31/12/2016
Number of participants: 1
Acronym: STUDeNT-learn
Project participant:
Rootzén, Helle (Intern)

**Modelling allergenic risk**
Department of Applied Mathematics and Computer Science
Period: 01/09/2013 → 18/01/2017
Number of participants: 8
Phd Student:
Birot, Sophie (Intern)
Supervisor:
Christensen, Tue (Intern)
Madsen, Charlotte Bernhard (Intern)
Main Supervisor:
Brockhoff, Per B. (Intern)
Examiner:
HEROS in mathematics - a new way of learning

Department of Mathematics
Department of Informatics and Mathematical Modeling
Period: 01/09/2008 → 31/08/2010
Number of participants: 3
Project participant:
Sendrup, Linda (Intern)
Schmidt, Karsten (Intern)
Project Manager, organisational:
Rootzén, Helle (Intern)

Financing sources
Source: Forskningsprojekter - Andre ministerier og styrelser
Name of research programme: Forskningsprojekter - Andre ministerier og styrelser
Amount: 3,122,478.00 Danish Kroner

E-learning project HEROS for first year math - new ways of learning

The aim of this project is to develop a new web based learning platform for the course Engineering Mathematics 1 – a platform which combines cutting edge e-learning materials and strategies with lectures, textbooks, weekly menus, and Maple demos. The main task is to further support the multifaceted architecture of the course while still keeping it clear cut and transparent. The idea is to make room within this architecture for several interlinked teaching styles and teaching materials and thus enhance the possibility for the individual student to find and operate his or her own most effective learning style. New “nonlinear” learning objects including text files, animations, video clips etc. will be developed and packed in order to create multiple entries into the process of understanding the key mathematical concepts.

Mathematical Statistics
Department of Informatics and Mathematical Modeling
Geometry
Department of Mathematics
LearningLab DTU
Administration
Period: 01/08/2008 → 31/07/2010
Number of participants: 4
Project ID: 15647
Project participant:
Markvorsen, Steen (Intern)
Schmidt, Karsten (Intern)
Sendrup, Linda (Intern)
Project Manager, organisational:
Rootzén, Helle (Intern)

Financing sources
Source: Forskningsprojekter - Andre ministerier og styrelser
Improved Statistical Analysis of Sleep EEG Data in Relation to Pharmacokinetics

Department of Informatics and Mathematical Modeling
Period: 01/07/2006 → 10/02/2010
Number of participants: 6
Phd Student:
Mortensen, Stig Bousgaard (Intern)
Supervisor:
Hougaard, Philip (Ekstern)
Main Supervisor:
Madsen, Henrik (Intern)
Examiner:
Rootzén, Helle (Intern)
Jennum, Poul (Ekstern)
Rydén, Tobias (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: ErhvervsPhD-ordningen VTU
Project: PhD

Processkapabilitet fra et industrielt perspektiv

Department of Informatics and Mathematical Modeling
Period: 01/10/2005 → 30/09/2010
Number of participants: 6
Phd Student:
Windfeldt, Gitte Bjørg (Intern)
Supervisor:
Hartvig, Niels Væver (Ekstern)
Main Supervisor:
Rootzén, Helle (Intern)
Examiner:
Kulahci, Murat (Intern)
Castagliola, Philippe (Ekstern)
Thyregod, Peter (Intern)

Financing sources
Source: Internal funding (public)
Name of research programme: ErhvervsPhD-ordningen VTU
Project: PhD

Continuing education voucher systems : A flexible and targeted statistics programme based on learning objects and blended learning

Learning should be fun as well as inspiring and innovative. What you learn should be directly applicable to your daily work and should help you see things in a new perspective, and your studies should fit into a busy life. Who of us has not tried to return home from a course, putting the briefcase away and shelving the hand-outs, only to forget the knowledge acquired during the excellent course because it was not really applicable to our daily work, and because there is not time during an ordinary working day to put acquired theories into practice. The world around us changes so fast that life-long learning is a prerequisite for possessing the competencies demanded by the business sector. Today, data analysis is used in practically all areas of society and plays an important role in almost any company. Many employees find it important to be familiar with data analysis and able to apply statistical methods – competencies that will increase the quality of their company and save it considerable expense. So we need a new type of continuing education that will reflect a rethinking of content, form and duration. In the future, continuing education will be in the form of voucher systems. You may attend the specific chunk of a study programme you require whenever it suits you and pay only for what you get. If continuing education is to be attractive to employees as well as companies, study programmes must meet the following requirements: •It should be possible to follow a programme in parallel with an ordinary job •It should be possible to work on study projects at your leisure. •Knowledge gained from a study programme should be directly applicable to your daily work. If the providers are to meet these requirements, the task of developing new study courses and tailor these to new...
students must be manageable. We have therefore proposed a new type of research-based continuing education courses. These courses are structured around 'learning objects', i.e. short complete education sessions, which may be combined in various ways according to the students' interests and levels. We combine them with 'blended learning', i.e. a combination of e-learning, web-based learning and face-to-face learning.

Department of Informatics and Mathematical Modeling
Aarhus University

Coloplast Danmark A/S
Period: 01/09/2004 → 31/12/2007
Number of participants: 3
Project participant:
Jacobsen, Lotte (Ekstern)
Project Manager, organisational:
Rootzén, Helle (Intern)
Hejsgaard, Søren (Ekstern)

Financing sources
Source: Forskningsprojekter - Andre ministerier og styrelser
Name of research programme: Forskningsprojekter - Andre ministerier og styrelser
Amount: 3,065,798.00 Danish Kroner
Project

Computer Supported Drug Development
Department of Informatics and Mathematical Modeling
Period: 01/10/2002 → 20/10/2005
Number of participants: 8
Phd Student:
Tornøe, Christoffer Wenzel (Intern)
Supervisor:
Agerø, Henrik (Ekstern)
Jonsson, E. Niclas (Ekstern)
Nielsen, Henrik Aalborg (Intern)
Main Supervisor:
Madsen, Henrik (Intern)
Examiner:
Rootzén, Helle (Intern)
Gabrielsson, Johan (Ekstern)
Vølund, Aage (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Ansat eksternt
Project: PhD

Development of Statistical Methods and Models for Evaluation and Determination of Environmental monitoring programs
Department of Informatics and Mathematical Modeling
Period: 01/04/2001 → 09/02/2005
Number of participants: 6
Phd Student:
Lophaven, Søren Nymand (Intern)
Supervisor:
Carstensen, Niels Jacob (Intern)
Main Supervisor:
Rootzén, Helle (Intern)
Examiner:
Nielsen, Allan Aasbjerg (Intern)
Grimvall, Anders (Ekstern)
Guttorp, Peter (Ekstern)
Optimal foraging theory applied to simple models of patchy environments

Department of Informatics and Mathematical Modeling
Period: 15/03/2001 → 08/02/2007
Number of participants: 6
Phd Student:
Nilsson, Lars Anders Fredrik (Intern)
Supervisor:
Beyer, Jan (Intern)
Thygesen, Uffe Høgsbro (Intern)
Main Supervisor:
Nielsen, Bo Friis (Intern)
Examiner:
Rootzén, Helle (Intern)
Haccou, Patricia (Ekstern)

Metoder til detektering og vurdering af trafiksikkerhedsproblemer i vejnettet

Department of Informatics and Mathematical Modeling
Period: 01/06/1999 → …
Number of participants: 7
Phd Student:
Vistisen, Dorte (Intern)
Supervisor:
Laursen, Jan Grubb (Intern)
Nielsen, Michael Aakjer (Ekstern)
Main Supervisor:
Thyregod, Poul (Intern)
Examiner:
Rootzén, Helle (Intern)
Kulmala, Risto (Ekstern)
Rørbeck, Jens (Intern)

Teknisk arbejdshygiejne: Prøvetagningsstrategi

Department of Informatics and Mathematical Modeling
Period: 01/06/1999 → 17/01/2003
Number of participants: 6
Phd Student:
Nyeland, Martin Erik (Intern)
Supervisor:
Olsen, Erik (Ekstern)
Main Supervisor:
Thyregod, Poul (Intern)
Examiner:
Rootzén, Helle (Intern)
Byrialsen, Kirsten (Ekstern)
Eduard, Wijnand (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Forskerakademiets Samfinansier
Project: PhD

Metoder til validering af prøvetagningsmetoder for bulkmaterialer

Department of Informatics and Mathematical Modeling
Period: 01/01/1999 → …
Number of participants: 8
Phd Student:
Thyregod, Camilla (Intern)
Supervisor:
Grønlund, Per (Ekstern)
Iwersen, Jørgen (Ekstern)
Tvermoes, Charlotte (Ekstern)
Main Supervisor:
Thyregod, Poul (Intern)
Examiner:
Rootzén, Helle (Intern)
Kristensen, Henning Gjelstrup (Ekstern)
Windfeld, Kristian (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Erhvervsforskerordningen
Project: PhD

Kvantitativ sammenligning af brystkræftmaterialet i Cancerregistret og DBCG's database

Data fra Cancerregistret (CRG) and Danish Breast Cancer Groups (DBCGs) register anvendes hyppigt ved opgørelser og videnskabelige undersøgelser. Specielt anvendes data fra DBCGs registre ofte i kliniske og epidemiologiske undersøgelser, blandt andet fordi mange af de for prognosen interessante oplysninger kun er tilgængelige i DBCGs register, og fordi kvaliteten af data, alt andet lige, bør være bedre i en klinisk database end i et epidemiologisk minimumsregister. Det er således af interesse at undersøge komplettheden såvel af CRG som af DBCGs register. The aim of the study is to compare the breast cancer patient material in the Danish Cancer Registry and the DBCG clinical database. The purpose of the Danish Cancer Registry and the DBCG clinical database is quite different. Therefore it is not surprising that the main part of the differences can be accounted for by systematical conditions.

Department of Informatics and Mathematical Modeling
Kræftens Bekæmpelse
Period: 02/12/1998 → 31/12/1999
Number of participants: 2
Project participant:
Rostgaard, Klaus (Ekstern)
Project Manager, organisational:
Rootzén, Helle (Intern)

Statistisk 3-D beregning af sandsynligheden for at finde en jordforurening.


Department of Informatics and Mathematical Modeling
Period: 01/10/1998 → 31/12/1998
Number of participants: 1
Project Manager, organisational:
Rootzén, Helle (Intern)
Bladder tumors
Dansk Urologisk Selskab har nedsat en arbejdsgruppe, der skal planlægge en landsdækkende registrering af patienter med blæretumor i Danmark med henblik på at forbedre, standardisere og rationalisere behandlingen af denne patientgruppe. Arbejdet tager udgangspunkt i det eksisterende BCR (Blære Cancer Registret), der kontinuerligt har akkumuleret data fra blæretumorpatienter gennem 10 år på Herlev og Skejby hospitaler.

Department of Informatics and Mathematical Modeling
Blærcancer registreringsgruppen
Period: 01/06/1998 → 31/10/1999
Number of participants: 2
Project participant:
Hermann, Gregers (Ekstern)
Project Manager, organisational:
Rootzén, Helle (Intern)

Breast cancer incidence and mortality
In Denmark, as in all western countries, breast cancer mortality has remained relatively stable. The most obvious explanations for the empirically improved survival would be improved treatment or earlier diagnosis, possibly caused by screening. If earlier diagnosis was the most important explanation one would expect to see a small change in stage specific survival, but a large change in the stage distribution towards less advanced stages of the disease in the time of diagnosis, and vice versa if improved treatment was the most important explanation. Obviously it is important to be able to distinguish between these two explanations. In the project we focus on answering the following questions: How is the breast cancer stage distribution in Denmark 1978 - 94? Why has the stage distribution of breast cancers at time of diagnosis improved in Denmark 1978-94?.

Department of Informatics and Mathematical Modeling
Danish Cancer Society
Aarhus University
Danish Institute of Clinical Epidemiology
University of Copenhagen
Period: 01/02/1998 → 31/12/2005
Number of participants: 7
Project participant:
Rostgaard, Klaus (Ekstern)
Lynge, Elsebeth (Ekstern)
Væth, Michael (Ekstern)
Madsen, Mette (Ekstern)
Mouridsen, Henning (Ekstern)
Olesen, Knud P. (Ekstern)
Project Manager, organisational:
Rootzén, Helle (Intern)

Anvendelse af apriori viden i bioassays
Department of Informatics and Mathematical Modeling
Period: 01/12/1997 → 22/09/2004
Number of participants: 6
Phd Student:
Rehm, Dorte (Intern)
Supervisor:
Hasløv, Kaare Robert (Ekstern)
Main Supervisor:
Thyregod, Poul (Intern)
Examiner:
Modellering og styring af sprøjtestøbeprosess

Department of Informatics and Mathematical Modeling
Period: 01/08/1997 → ...
Number of participants: 7
Phd Student:
Thyregod, Peter (Intern)
Supervisor:
Melgaard, Henrik (Intern)
Spliid, Henrik (Intern)
Main Supervisor:
Madsen, Henrik (Intern)
Examiner:
Rootzén, Helle (Intern)
Bisgaard, Søren (Ekstern)
Olsen, Klaus Juel (Ekstern)

Financing sources
Source: Internal funding (public)
Name of research programme: Kandidatstipendium ansat på DT
Project: PhD

Correlating phospholipid fatty acids (PLFA) in a landfill leachate polluted aquifer with biochemical factors by multivariate statistical methods.

Different multivariate statistical analyses were applied to phospholipid fatty acids representing the biomass composition and to different biogeochemical parameters measured in 37 samples from a landfill contaminated aquifer at Grindsted Landfill (Denmark). Principal component analysis and correspondence analysis were used to identify groups of samples showing similar patterns with respect to biogeochemical variables and phospholipid fatty acid composition.

Department of Informatics and Mathematical Modeling
Department of Environmental Science and Engineering
Period: 01/01/1996 → 31/12/1997
Number of participants: 2
Project participant:
Ludvigsen, Liselotte (Intern)
Project Manager, organisational:
Rootzén, Helle (Intern)

Quality Improvement of Drug Therapy for Asthma Patients - Evaluation of a Co-operative Danish Programme

Drug therapy is an essential in managing asthma. In spite of increased possibilities in asthma management (eg. peak-flow meters and patient diaries) and the existence of improved anti-asthmatic drugs, the morbidity and mortality of asthma have not improved in Denmark. The purpose of this Therapeutic Outcomes Monitoring project is to establish therapeutic outcomes monitoring as a continuous quality improvement activity for the medication use process among asthma patients in primary health care. To evaluate the experiment in pharmacy practice we use a combined evaluation strategy which is composed of (i) a controlled effect study, (ii) a process- and participant evaluation, (iii) a health economical analysis, and (iv) a qualitative ingerview study.

Department of Informatics and Mathematical Modeling
Danish College of Pharmacy Practice
**Statistik Behnadling af Økotoksikologiske DATA**

Department of Informatics and Mathematical Modeling  
Period: 01/07/1995 → …  
Number of participants: 3  
PhD Student:  
Andersen, Jens Strodl (Intern)  
Main Supervisor:  
Rootzén, Helle (Intern)  
Examiner:  
Løkke, Hans (Ekstern)

**Financing sources**  
Source: Internal funding (public)  
Name of research programme: Forskningsrådsstip.-SU, Eksp  
Project: PhD

---

**Anvendelse af stokastiske differentialligninger i biometri.**

De klassiske modeller for biologisk nedbrydning af stoffer antager et forloeb, der følger en eller flere sammenhørende differentialligninger med faste og tidsafhængige koefficienter. I praksis ses imidlertid et forloeb, der nok er kontinuert, men mere tilfeldigt og desuden er overlært med maalestøj. Projektets formål er saaledes at beskrive de tilfeldige variationer i nedbrydningsforloebet ved hjælp af stokastiske differentialligninger samt at identificere maalestøjen.

Department of Informatics and Mathematical Modeling  
Period: 01/01/1995 → 31/12/1999  
Number of participants: 3  
Project participant:  
Spliid, Henrik (Intern)  
Wang, Chunyan (Ekstern)  
Rootzén, Helle (Intern)

---

**Biologisk vækst i multikomponentsystemer.**

Der betragtes multikomponentsystemer af organiske stoffer, hvor de enkelte stoffer kan nedbrydes af en eller flere grupper af mikroorganismer. Der skal saaledes opstilles en model der beskriver omsætningen af stoffer. Ligningssystemets strukturelle karakter antages at være kendt og problemet bestaar saaledes i at estimere de ukendte parametre, der indgår i differentialligningerne. Desuden behandles problemer vedr. observerbarhed. Konkret er formålet at bedre forståelsen af de grundlæggende biologiske og reaktionskinetiske forhold, der bestemmer omsætningen af mono aromatiske hydrocarboner (MAH) i grundvand, saaledes at der skabes basis for en biologisk baseret oprensningsteknik for MAH-forurenent grundvand.

Department of Informatics and Mathematical Modeling  
Department of Environmental Science and Engineering  
Period: 01/01/1995 → 31/12/1999  
Number of participants: 4  
Project participant:  
Spliid, Henrik (Intern)  
Sommer, Helle Mølgaard (Intern)  
Arvin, Erik (Intern)  
Rootzén, Helle (Intern)
Faktorforsøg med funktionelt respons.


Department of Informatics and Mathematical Modeling
Period: 01/01/1995 → 31/12/1999
Number of participants: 3
Project participant:
Spliid, Henrik (Intern)
Sommer, Helle Mølgaard (Intern)

Project Manager, organisational:
Rootzén, Helle (Intern)

Project

Incidence of clubfoot in Frederiksborg County, Denmark.

The incidence of congenital clubfoot in Frederiksborg County, Denmark, was studied over a period of 16 years (1979-1994). Altogether 60,186 living infants were born, and of these 72 had a congenital clubfoot. Twenty-five children (35%) had bilateral clubfoot and 54 (75%) were boys. The overall incidence was 1.20 per thousand children. The incidence increased significantly during the observation period and was 2.41 per thousand in 1994. We cannot explain the rising incidence. The statistical analysis is made on the base of the theory for generalized linear models.

Department of Informatics and Mathematical Modeling
Hillerød Sygehus
Period: 01/01/1995 → 31/12/1997
Number of participants: 2
Project participant:
Andersen, Mikkel O. (Ekstern)

Project Manager, organisational:
Rootzén, Helle (Intern)

Project

Statistical Treatment of Ecotoxicological Data based on Hazard Modelling

When characterising complex chemical pollution i.e. pesticide polluted groundwater or testing the effects of chemical compounds on the environment, ecotoxicological tests are of great value. This is due to their sensitivity and their expression of the overall toxicity. Since environmental pollution is increasing it is judged that ecotoxicological assays will have increasing impact on the toxicity- and risk assessment of environmental pollution. Evaluating results from ecotoxicological tests inevitably include estimation of dose-response relations. Conclusions about toxicity of the pollution or tested chemicals are summarised in characteristics extracted from the dose-response relationship. A revision of the statistical methods for extracting these measures has been internationally recommended by the scientific community. The dose/time-response models used are based on biological considerations, the key assumption is that the hazard rate is proportional to the concentration of the chemical compound in the animal as far as it exceeds the no-effect level. The uptake dynamics are described by a one compartment model involving the uptake rate and elimination rate. The dynamic models are compared with the traditional models, regarding the number of parameters, description of experimental data etc.

Department of Informatics and Mathematical Modeling
Department of Environmental Science and Engineering
Vrije Universiteit Amsterdam
Period: 01/01/1995 → 31/12/1998
Number of participants: 6
Project participant:
Andersen, Jens Strodl (Intern)
Baun, Anders (Intern)
**Statistical Treatment of Ecotoxicological Data with Continuous Response using biologically based models**

When characterising complex chemical pollution i.e. pesticide polluted groundwater or testing the effects of chemical compounds on the environment, ecotoxicological tests are of great value. This is due to their sensitivity and their expression of the overall toxicity. Since environmental pollution is increasing it is judged that ecotoxicological assays will have increasing impact on the toxicity- and risk assessment of environmental pollution. Evaluating results from ecotoxicological tests inevitably include estimation of dose-response relations. Conclusions about toxicity of the pollution or tested chemicals are summarised in characteristics extracted from the dose-response relationship. A revision of the statistical methods for extracting these measures has been internationally recommended by the scientific community. Generalized Nonlinear regression methods using classical dose-response models, are used to estimate the variance heterogeneous dosis-response relations and estimate endpoints and their confidence limits.

**Department of Informatics and Mathematical Modeling**

**Department of Environmental Science and Engineering**

**Period:** 01/01/1995 → 31/12/1998

**Number of participants:** 4

**Project participant:**
- Andersen, Jens Strodl (Intern)
- Baun, Anders (Intern)
- Nyholm, Niels (Intern)

**Project Manager, organisational:**
- Rootzén, Helle (Intern)

---

**Statistics in ecotoxicological guidelines**

Project no. 1161. Grundvandscentret. Ph.D. project: Jens Strodl Andersen A revision of the guidelines for ecotoxicological tests has shown severe lack of statistical recommendations. It has been internationally recommended by the scientific community to enhance the use of statistics in the design and data treatment in most ecotoxicological tests. Helle Holst has participated in International workshops which have resulted in reports and articles describing the state of the art and the perspectives for the future. Research regarding design and modelling is ongoing

**Department of Informatics and Mathematical Modeling**

**Period:** 01/01/1995 → 31/12/1998

**Number of participants:** 1

**Project Manager, organisational:**
- Rootzén, Helle (Intern)

---

**Financing sources**

**Source:** Unknown

**Name of research programme:** Ukendt

**Amount:** 391,200.00 Danish Kroner

**Project**

---

**Statistisk analyse af jordkomponenters betydning for cadmium sorption i jord.**

Formaalet med projektet er at undersøge om distributionskoefficienten, der udtrykker forholdet mellem komponenten bundet i hhv. jord- og vandfasen kan beskrives ved hjælp af en række jordparametre samt hvilke jordparametre der i denne forbindelse er vigtige. Sekundaert er formaalet at optimere bestemmelsen af distributionskoefficienten udfra sammenhørende vaerdier af S og C. Projektet udføres i samarbejde med IMT og KVL.

**Department of Informatics and Mathematical Modeling**

**Department of Environmental Science and Engineering**

**Period:** 01/01/1995 → 31/12/1997

**Number of participants:** 2

**Project participant:**
- Christensen, Thomas Højlund (Intern)
Activities:

**learnT DTU Conference 2017 - The 2nd Conference on Digital Learning Technology**
*Period: 17 Nov 2017*
Charlotte Lærke Weitze (Organizer)
Helle Rootzén (Organizer)
Department of Applied Mathematics and Computer Science
Statistics and Data Analysis
Degree of recognition: National

**Related event**

**learnT DTU Conference 2017 - The 2nd Conference on Digital Learning Technology**
*17/11/2017 → …*
*2800 Kgs. Lyngby, Denmark*
Activity: Attending an event › Participating in or organising a conference

**Online Educa Berlin 2016**
*Period: 1 Dec 2016*
Helle Rootzén (Speaker)
Department of Applied Mathematics and Computer Science
Statistics and Data Analysis

**Related event**

**Online Educa Berlin 2016**
*30/11/2016 → 02/12/2016*
*Berlin, Germany*
Activity: Talks and presentations › Conference presentations

**Columbia University**
*Period: 1 Nov 2015 → 31 Jan 2016*
Helle Rootzén (Visiting researcher)
Department of Applied Mathematics and Computer Science
Statistics and Data Analysis

**Description**
Visiting Professor
Activity: Visiting an external institution › Visiting another research institution

**Press clippings:**

**Universitetet: Vi skal uddanne Big data-ekspert**
Helle Rootzén
*06/12/2016*
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis

**Media contribution (1)**

**Universitetet: Vi skal uddanne Big data-ekspert**
*06/12/2016*
Børsen, Print
Universiteter: Vi skal uddanne Big data-eksperter
Helle Rootzén
06/12/2016
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis

Universiteter: Vi skal uddanne Big data-eksperter
Helle Rootzén
06/12/2016
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis

Nyt center skal koble læring med teknologi
Helle Rootzén
01/12/2016
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis

Er vi klar til et nyt læringskoncept?
Helle Rootzén
15/11/2016
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis
800.000 gode grunde til datalogi i skolen
Helle Rootzén
20/04/2016
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis

Media contribution (1)

800.000 gode grunde til datalogi i skolen
20/04/2016
Berlingske Tidende, Print
Stephen Alstrup, Ole Lehmann Madsen, and Helle Rootzén
Helle Rootzén
Department of Applied Mathematics and Computer Science, Statistics and Data Analysis
Press / Media

Jeg skulle lige udfordre mig selv en gang til
Helle Rootzén
01/02/2015

Subject
Campusliv / Campus Life
Department of Applied Mathematics and Computer Science

Media contribution (1)

Jeg skulle lige udfordre mig selv en gang til
01/02/2015
DTU Avisen, Print
Helle Rootzén
Department of Applied Mathematics and Computer Science
Press / Media