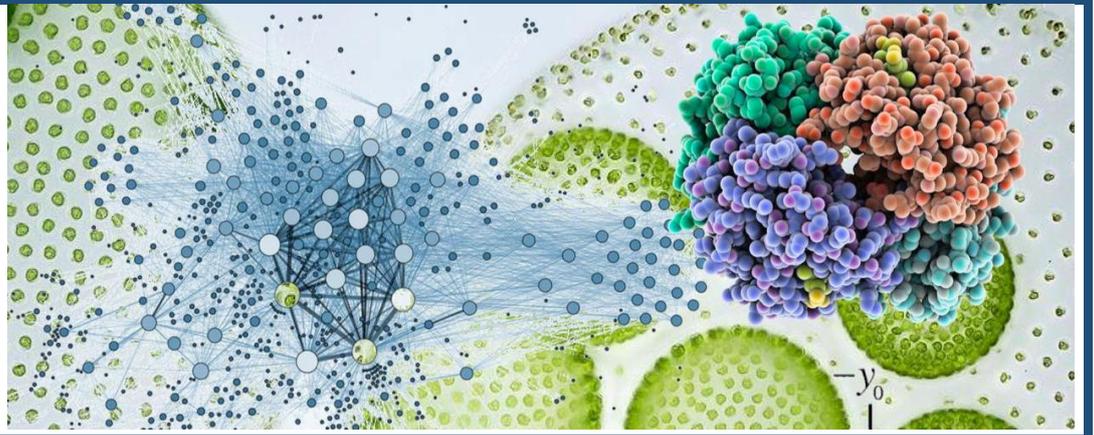


NEWSLETTER

Department of
Informatics



No. 21/2019
13th December 2019



Editor-in-chief: Pinar Heggernes. Editor: Linda Vagtskjold. Contributions or comments to the newsletter are very welcome.

Dear colleagues,

In this last newsletter of 2019, I find myself a little bit in the philosophical corner. During the last few months I have been involved in forming and revising several strategy documents. Every such process is very rewarding for the participants: the exchange of ideas and arguments, all that impressive level of knowledge and experience gathered in the room, and all that we can learn from each other. What characterizes the final document in the end, though, is of course compromise. So, is such a document really necessary or useful, especially if it ends up being quite general? Perhaps the most important, after all, are those things that are not in the strategy? And perhaps some general things cannot be repeated often enough?



One subject that always comes up in every strategy discussion is of course basic research versus applied research. I always get surprised by the arguments for the more importance of research initiated from urgent needs, rather than research with a more open-ended long-term application potential. Just yesterday, our department seminar was on Bayesian learning and Bayesian networks, that are so central in machine learning, which has found so many applications recently. In that respect, it is refreshing to note that Bayes' theorem that led to all that, was proved in 1763.

Since we are always fierce defendants of basic research, I experience many times that people think we have no applied research at our department. How far from the truth! The research of our bioinformatics and visualization groups have immediate applications in medicine, whereas our optimization and machine learning groups are involved in applications in industry, climate and renewable energy, just to mention a few. Still, I would call this basic research because all our research concentrates on developing new theories, methods and algorithms. Perhaps a better description is basic research with applications?

As you can see, I have mainly questions, and no clear answers today. Perhaps I can conclude with a much more concrete and happy issue, thereby drawing your attention from research to education. Yesterday it was announced that iEarth, the center for geoscience education coordinated by our university, was awarded the status of Center of Excellent Education. This is the second center of this type at our university (the other one is BioCEED), and both of them are at the Faculty of Mathematics and Natural Sciences. I think this is something that we can all be proud of and get inspiration from. Congratulations to the Department of geo sciences, to our faculty, to our university, and to all of us. May there be many more good news in 2020!

"The difference between basic research and applied research is that basic research has more applications." - Unknown

I wish you all a joyful and peaceful holiday season and a very happy new year!

-Pinar



The Dean's Blog – Helge K. Dahle

[The Dean's blog](#) aims to inform us of ongoing work and processes at the Faculty of Mathematics and Natural Sciences.

His latest postings: [Betyr det noe at vi skal bli et klimanøytralt universitet?](#) - [Å hegne om den akademiske fridomen](#) - [Nødvendig omstilling av energiutdanningene](#) - [Ny økonomimodell gir muligheter](#)



Welcome new colleagues!



Ermes Franck

Ermes started last week in his new position as research fellow in Cryptography and Data security. His main supervisor will be Chunlei Li.

Ermes is Italian. He did his Master's in Mathematics at the Università degli studi di Trento in 2017. His last position before he came to us was as Software Engineer at the AKKA technology DSW in Stuttgart, Germany.

Current Issues [På Høyden](#) - [Khrono](#) – [News from NFR](#) – [News from UiB](#) – [Informatics on Facebook](#)

Farewell Jaakko



Yesterday's Faculty and Staff lunch also served as a farewell gathering for Jaakko. He will be leaving us next week to take up his new position as Professor at the University of Turku from January 2020.

The good news is that he will enter into an adjunct Professorship at our department from 1st January, so we will see him here from time to time also in the future.

We all love you, Jaakko, and we wish you all the best in Turku!

Picture report from the Julebord last Friday - shiny, happy people 😊





PhD Updates

VISUM 2020 :: Vision Understanding & Machine Intelligence Summer School



Do you want a **great opportunity to get on the cutting edge** of Computer Vision and Machine Learning fields? Check on **VISUM 2020**. The 8th edition of the Vision Understanding and Machine Intelligence (VISUM) Summer School will take place between **2 and 10, July 2020**, at Universidade Portucalense (UPT), in **Porto, Portugal**. [Learn more here](#).

Research, Science and Seminars ScienceNorway.no - forskning.no

VCF seminar today at 10.15!

Visual Computing Forum

<http://vis.UiB.no/vcf/>



Interactive Visual Analysis and Causal Modeling on Clinical Data



Friday, 13th of December, from 10:15
Thormøhlens gate 51 (ViVite)
Konferanserom C

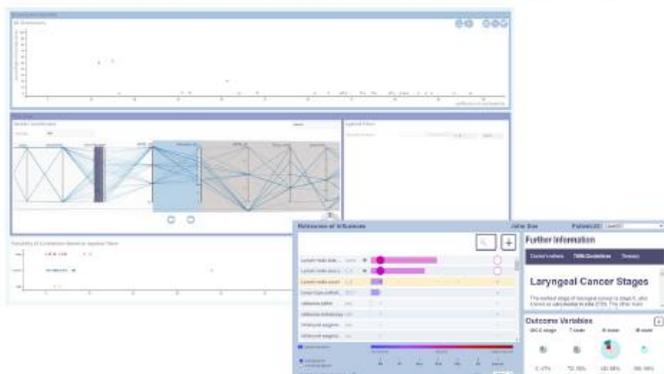
Juliane Müller
Research Associate @ Otto von
Guericke University Magdeburg

Abstract:

The enormous amount of medical data recorded in clinical routine allows for new facilities in hypotheses generation and identification as well as automated causal model generation for Clinical Decision Support (CDS). Although there is always a validation step by domain experts required before taking generated causal relations for granted, automatically-generated causal models can serve as an initial draft for disease-specific causal model creation and validation. To improve the correctness of these drafts, variables of interest first need to be

identified, since fewer involved variables in model generation lead to better results among the generated causal relations. When validating and applying a causal model in clinical routine, comprehension of the underlying reasoning is a crucial prerequisite, especially in the medical domain.

In this talk, I will present a pipeline for generating causal models from data. Here, I'm especially focusing on the visual assistance in identifying variables of interest and on the comprehension for validation and usage in daily clinical routine.





Department of Informatics

Center for Data Science, CEDAS

<http://www.UiB.no/cedas>



Visual Analytics for Data Science: can we make humans understanding high-dimensional data?

Michaël Aupetit

Senior Scientist @ QCRI.org.qa

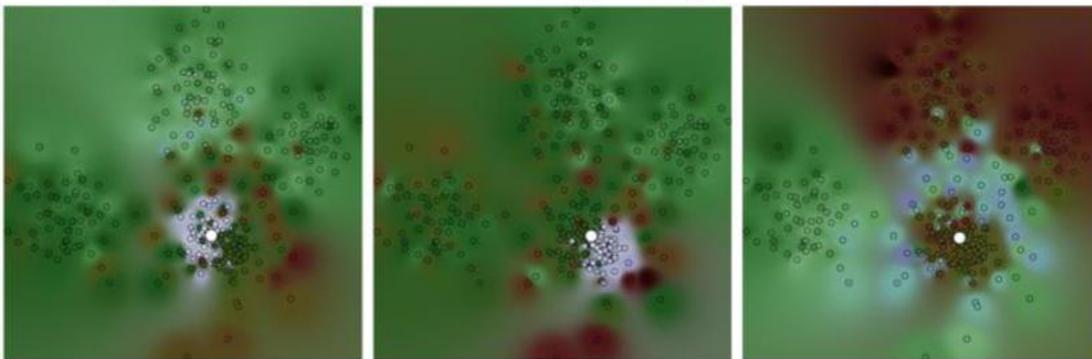


Thursday, January 9, 2020, from 14:15

Store Aud., 2nd floor, Høyteknologisenteret (data blokk)

Abstract

Modern technologies in all application domains of data science like cyber-security, environment, health or social media, are the sources of very large and multi-dimensional datasets. While we witnessed 70 years of exponential increase of computing power, human cognitive capacity to understand these data remains the same. This growing gap calls for new ways to represent and summarize data enabling human discovery, analysis, and control. Visual Analytics attempts to bridge this gap using interactive visualizations and advanced processing and modeling techniques. I will present several approaches I have explored for the last 10 years to tackle this challenge: inferring topological invariants of latent structures from data, enriching dimension reduction layouts, and modeling human perception to design more trustworthy Machine Learning techniques.



Popular science writing course in Norwegian (16 January 2020)

The Faculty of Mathematics and Natural Sciences' offers a one-day popular science writing course. The course will be in Norwegian and targets scientific staff members (PhD candidates, Postdocs, Associate Professors, Professors, forskere etc.) who want to learn more about how to best present their research in Norwegian media (newspapers, websites). You are required to submit a text before the course. If you are interested in attending the course, please register via [this website](#) by 3 January 2020.

Funding opportunities [Research support services](#) - [Upcoming funding opportunities](#)

On a monthly basis, the department releases a comprehensive overview over [upcoming funding opportunities](#) on its website for [research support services](#). Note: The first detailed overview for the coming year will be available in early February 2020. **Please inform research coordinator [Stefanie Meyer](#) about all planned and ongoing funding applications!**

At this point, we would like to highlight the following upcoming calls and funding-related events:

Local funding

[TMS Starting Grants, call 2020](#)

“The [Trond Mohn Foundation Starting Grant programme](#) is open to departments and faculties at the University of Bergen (UiB) aiming to recruit young national or international candidates with outstanding academic merit and research potential. [...] TMS now calls for proposals for four-year grants beginning in 2021. Cross-disciplinary project proposals and proposals from all disciplines are welcome, if they correspond to the research strategies and recruitment needs at UiB. [...] UiB faculties may nominate candidates that meet the eligibility criteria as follows: (i) Candidates who hold a permanent position as an associate professor or professor at UiB are not eligible for nomination. (ii) A candidate cannot be nominated two consecutive years. (iii) Candidates who have reached the age of 40 by 16 March 2020 are normally not eligible. The age limit may be extended for a maximum of two (2) years [under certain] circumstances.” **Application deadline for the prequalification: 16 March 2020.**

National funding

[Centre for Advanced Study \(CAS\) projects](#)

The CAS invites faculty members who hold permanent research positions at its partner institutions in Norway to submit a [project proposal for the academic year 2022/23](#). The main objective of the program is to promote excellent, fundamental, and curiosity-driven research through offering a unique infrastructure and administrative services. The applicant(s), i.e. the project/group leader(s), are expected to spend the whole year at the CAS in Oslo. In addition, they can invite researchers from around the world at any career stage to participate in the project; whether it is just for a few months or the whole year. **Application deadline: 15 January 2020.**

[Research Council of Norway: Student entrepreneurship](#)

Students who have recently received their master degree can, in collaboration with a Norwegian university or university college, apply to the RCN to get funding for [realizing a “business idea](#) or to carry out crucial activities that will mitigate technology- and concept-related risks by providing the answers to uncertainties that are preventing the project from moving forward in the commercialisation process”. UiB has initiated an [innovation hub for students](#) where those who want to apply can get help. **RCN application deadline: 12 February 2020.**

[Research Council of Norway: Annual eScience Event from 2020 to 2025](#)

The RCN has announced funding for an annual eScience event. The event shall provide a meeting place for young researchers to “learn about new ideas, methods, and theories within eScience as well as build a professional network”. **RCN application deadline: 12 February 2020.**

[Research Council of Norway: Application deadline 2020 for researcher projects](#)

Do not forget: Next year’s main application deadline for researcher projects (including young research talents projects) will be **6 May 2020!**

International funding

[COST](#)

COST is the [European Cooperation in Science and Technology](#). The organization provides funds for researchers from all fields to set up international, interdisciplinary research networks (so-called COST Actions). COST Actions run on average for 4 years and require the participation of at least seven COST Members. **Application deadline: 29 April 2020.**

[NordForsk: The Research and Innovation Programme on Digitalisation of the Public Sector](#)

“The [Digitalisation Programme](#) focuses on three interrelated areas that enable and shape the digital transformation of the public sector: (1) the enabling factors of digitalisation; (2) digital innovation; and (3) society and the end-user perspective. The overarching aim of the call is to combine and integrate knowledge-based, digital innovation efforts related to the public sector with research on the related drivers, effects and impact on society and end-users.” **Application deadline: 16 January 2020.**

Events

[ERC info event \(at UiB\)](#)

UiB offers an [information event about ERC Advanced Grants](#) on 18 February 2020. “The workshop is divided into two main sections. First, we will lay the foundations of the ERC grant. Then, we focus on conveying to the participants information which cannot be found in the ERC official documentation. This training will clarify the basic knowledge and requirements of ERC alongside the more elusive and conceptual parts of this unique grant.” The course language will be English. **Registration deadline: 13 February 2020.**

Fridtjof Nansens belønning for yngre forskere 2020

Utlysning med frist for å nominere 10. februar 2020. Fridtjof Nansens belønning for yngre forskere er todelt; én i humaniora og samfunnsfag og én i realfag og medisin. Hver av belønningene er på 75 000 kroner og ett diplom. Belønningen tildeles norske forskere eller forskere fast bosatt i Norge, som ennå ikke har fylt 40 år.

Forslagsrett har medlemmer av Det Norske Videnskaps-Akademi og forøvrig professorer ved våre universiteter og vitenskapelige høyskoler. Forslag til prisvinnere med kort begrunnelse (inntil 2 sider A4) samt kortfattet CV og publikasjonsliste sendes til Line Therese Nævestad på e-post: l.t.navestad@dnva.no

Industrial Ph.D. scheme – Doctoral projects in industry

Do you have a master graduate who now works at a company and would make a great PhD student? Then perhaps, your former student, yourself and the company together could apply for this? Several of our research groups have used this opportunity with great success. [Please find more information here.](#)

Vacant positions

Associate professor in Algorithms

Closing date: 31st January 2020. Please find [the announcement here](#)

Postdoctoral research fellow in informatics - programming theory

Closing date: 31st January 2020. Please find [the announcement here](#)

Postdoctoral research fellow in informatics - data science

Closing date: 27th January 2020. Please find [the announcement here](#)

Postdoctoral Research Fellow position in informatics: logic and graph theory

Closing date: 20th January 2020. Here you will find [the announcement](#)

Researcher in informatics: algorithmic foundations of data science

Closing date: 15th January 2020. Please find [the announcement here](#)

PhD position in machine learning

Closing date: 12th January 2020. Please find [the announcement here](#)

Administrativ koordinator for CBU (seniorkonsulent)

Closing date: 8th January 2020. Please find [the announcement here](#)

Postdoctoral Research Fellow position within Cancer Bioinformatics, CCBIO

Closing date: 27th December 2019. Please find [the announcement here](#)



God Jul!