



FROM VISION TO DECISION

NEWSLETTER

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Leadership Team:

Program Manager

Ragnar Nortvedt
Tel 55970529 / 92829508
ragnar.nortvedt@helse-bergen.no
Scientific Director
Odd Helge Gilja
odd.gilja@helse-bergen.no
Arvid Lundervold
arvid.lundervold@biomed.uib.no
Helwig Hauser
helwig.hauser@uib.no
Antonella Munthe-Kaas
antonella.zanna@uib.no
Renate Grüner
renate.gruner@ift.uib.no
Dag Magne Ulvang
dagu@cmr.no
Ingfrid Haldorsen
ingfrid.haldorsen@helse-bergen.no
General Secretary
Elin Myhrvold Riple
Tel: 55972954
elin.riple@med.uib.no

Project Leaders:

Roald F. Havre
Torfinn Tætt
Bjørn Tore Gjertsen
Knut Matre
Paul L. Muren
Arvid Lundervold
Jarle Rørvik
Ingfrid Haldorsen
Eli Renate Grüner
Martin Biermann
Ivan Viola
Trygve Hausken
Mai Tone Lønnebakken

Web:
<http://medviz.uib.no>

Postal address:
MedViz
Att. Ragnar Nortvedt
Haukeland University
Hospital,
Møllendalsbakken 7,
5021 Bergen, Norway

Dear MedViz Supporter

It is a pleasure to serve you this Newsletter as a Christmas gift from MedViz. Please, read the interview with Dr. Paolo Angelelli from Department of Informatics, UiB, light up your brain with information from Structural Equation Modeling and dig deeper into medical innovation aspects during your well deserved Christmas holidays. OR just relax like the MedViz'zers at our joint MedViz and Visual Computing Forum Christmas lunch (photo below).



Interview with Dr. Paolo Angelelli

Background

Paolo Angelelli was born in a town called Fermo in Italy and grew up in a small village nearby.

-Have you always been interested in informatics, Paolo?

-Well, I liked computers when I was a child and had a simple computer programming course during high school before I really became interested in computer science during my studies at the University of Bologna, in Italy.

Bologna is a nice place for students and I took my Master in Computer Science there too.

My Master thesis was entitled *Enterprise computing and integration: a case-study*. The work was done for Wincor Retail Consulting, the Italian subsidiary of the German international corporation Wincor. The thesis was about integrating legacy components and databases in a modern enterprise middleware that was being developed in Wincor, Paolo tells.



-If you compare the opportunities for Master students in Bologna vs. Bergen, what would be the main differences? –The two departments have a somewhat different focus. Bologna's Computer Science department had a special focus on operating systems, computer networks, computer simulations and theoretical computer science, while Bergen research groups focus on visualization, algorithms, optimization, cryptography and security, programming languages and bioinformatics. The informatics in Bergen was recently ranked among the best within Norway by NFR, Paolo explains.

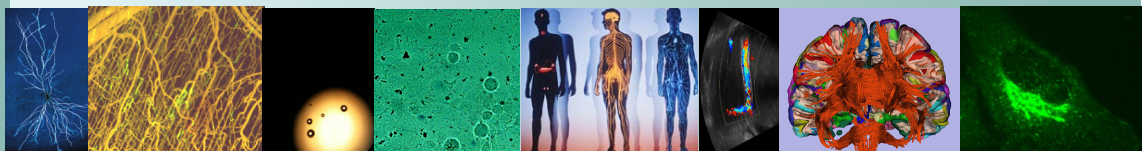
PhD studies

-What was your motivation to carry on with further studies in Bergen? [Read the interview with Angelelli](#)

cmr



HELSE BERGEN
Haukeland University Hospital



Structural Equation Modeling



Dr. Kyrre Breivik from UNI Research Helse gave an introduction course to Structural Equation Modeling (SEM) in Bikuben Conference Center at HUS campus 24.11.2015.

SEM is a confirmatory set of methods suited to find out how well a model fits to your data. SEM has also been called 'covariance structure modeling' or 'causal modeling' and is part of the generalized linear model (GLM) (Nelder and Wedderburn 1972), dealing with multiple regression, path analysis and factor analysis. SEM has lately been expanded to include item response theory, multilevel analyses and latent variable classification. This means that you might e.g. run path analysis on several different levels. [Read more about SEM](#)

Innovation initiatives in the Health sector

Lately we have followed two workshops on innovation in the health sector, both in Gothenburg (03.11.2015) and in Bergen (15.12.2015). This topic is high on the agenda in the Nordic countries and the Norwegian Government's action plan for following up the HelseOmsorg21 strategy states that "It is necessary to pursue **innovation**, knowledge and technology to meet the challenges in the sector and facilitate safe services of high quality, renewal and industrial development." The patient is the main focus and our Minister of Health Bent Høie has encouraged us to create better user experiences. Helse Vest is currently therefore also working on a new innovation strategy.

The main topic under the Nordic Health Research and Innovation Networks (NRI) workshop at Sahlgrenska University Hospital in Gothenburg was to determine *how different Nordic innovation projects can add value to each other*. Here follows a few conclusions:

- Collaboration between the silos is needed
- Decision making commitment and both top-down and bottom-up initiatives are important
- It is better to take several smaller steps than one big step
- One should make the project's output measurable, both hard facts and soft parameters
- One should involve end-users to ensure solving their actual needs
- Smart, strong and brave leadership is needed
- Money is needed, also for the implementation phase

See also: [14 key points -for securing successful implementation & sustainable innovation](#)



The workshop at Bikuben, Haukeland University Hospital was arranged by Synnøve Olset (picture) at Section for eHealth in close cooperation with Jens Reigstad at Bergen Technology Transfer Office (BTO). The main topic was *testbeds and user friendly ICT solutions*. We got a variety of presentations ranging from the Proficiency Center at HUS (Ferdighetscenteret by Marte Fjellstad) to Centre for Connected Care by Innovation Director Kari J. Kværner at Oslo University Hospital, and examples ranging from experiences with development of *graviDIA* (App and a communication platform for pregnant, by Physician Agnethe Lunde, HUS) to *eMeistring* (eMastering internet based therapy and guidance of psychological disorders, by psychology specialist Tine Nordgreen, UiB). Here follows a few conclusions:

- We need to establish a testbed / lab at HUS. Section for eHealth, BTO and MedViz are potential cooperating partners
- Testbeds to perform clinical studies are essential to get approval of new medicines
- We need arenas to test new solutions because nobody will buy something that does not work
- Spread of knowledge and know-how is a new innovation per se
- Empower the users, so that the innovations become *user driven* in are based on *needs*
- Clinicians think that social media can be used to provide information on prevention, diagnosis and treatment
- Linking social media to patient electronic records would benefit researchers
- The path from an innovation to a designed product is not straight forward, however, help is fortunately available, e.g. from the Halogen company
- Sharing of data should be an integrated part of how public sector handles information, develops solutions and shares services. You can find data sets: www.data.norge.no or at Facebook: "Open Data Bergen"

Upcoming events

Geilo Winter School in Scientific Visualization, January 17 – 22, 2016.

<http://www.sintef.no/projectweb/geilowinterschool/>

2nd Symposium of Bridging Nordic Imaging and the 1st Cellular Imaging workshop in Gothenburg, April 14 – 15, 2016.

<http://ccigothenburg.com/>

MedViz and VCBM joint Conference, Bergen, September 7 – 9, 2016

<http://medvizvcbm.uib.no/>

Facebook event: <https://www.facebook.com/events/770818463024537/>

Facebook page: <https://www.facebook.com/medvizvcbm/> (like it!)

Ragnar Nortvedt
Program Manager

