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FROM VISION TO DECISION

NEWSLETTER

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Dear MedViz Supporter

Happy New Year! New pages, new budget, new images and hopefully new ideas and innovations will appear during this year. MedViz has planned a conference in June that will emphasize innovations in tracer development, imaging, image analysis and visualization, together with our collaborative partners Center for Nuclear Medicine, HUH and Molecular Imaging Center (MIC) at Dept. of Biomedicine, UiB. We hope that you already now will schedule this event on June 15-16, 2015 in your calendar. In the present issue you may read more about late events that took place in December and an interview with Asc.Professor Ivan Viola from Vienna.

Late events

December: The Radiological Society of North America (RSNA) had its centennial celebration in December 2014



at the annual international radiological conference hosted in Chicago, USA. The conference offers the most comprehensive medical imaging program in the world with more than 300 courses covering topics ranging from state of the art clinical radiology to cutting-edge research and the latest in radiology informatics. This year >30,000 professionals (radiologists, radiographers, physicists, informaticians) attended the conference. Furthermore, >30,000 attendees represented the >700 exhibitors (e.g. Siemens, GE, Philips) showcasing their newest products and innovations within medical imaging.

Jenny Aase Husby, who is a PhD student in the Bergen Abdominal Imaging Research Group, and works in MedViz project # 10 "Functional imaging of endometrial cancer angiogenesis for monitoring tumor response to targeted therapy", headed by Professor Ingfrid Haldorsen, gave a presentation at RSNA 2014. She was the only Norwegian radiologist selected to present at RSNA this year.

The title of Husby's presentation was: Metabolic tumor volume on FDG-PET/CT predicts deep myometrial invasion, lymph node metastases and survival in patients with endometrial carcinoma. The authors were: Jenny Aase Husby, Bernt Christian Reitan, Jone Trovik, Øyvind Salvesen, Martin Biermann, Helga Salvesen and Ingfrid Haldorsen.

10. December: Erik A. Hanson defended his thesis "Image processing methods for 4D magnetic resonance



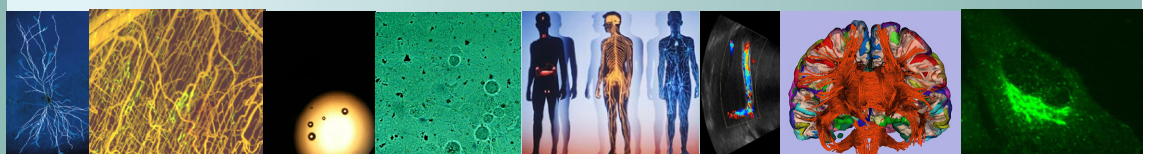
acquisitions from brain and kidney". Erik demonstrated how correlation-based discrete graphs were applied for segmentation of regions of interest in the kidney. If each coordinate of the graph represents a voxel, the edges between the coordinates can be weighted and represent the similarities between neighbor voxels and thus quantify the functional similarities in parts of the kidney. Erik predicted that non-local segmentation also will show its potential in other medical modalities than MR in the future, and within 4D video analyses and remote sensing as well.

From the left: Professor and Supervisor Arvid Lundervold, Professor and Supervisor Alexander Malyshev, Professor and Chairman of the PhD Committee Xue-Cheng Tai, opponent Vincent Barra (ISLMA), Chairman of the doctor defence Professor Alf Øien, the candidate Dr. Erik A. Hanson and the opponent Anne Solberg (UiO).

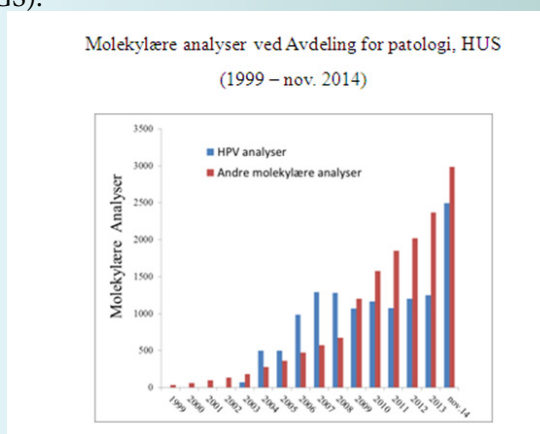
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11. December: Professor dr. med. Olav Karsten Vintermyr from Dept. of Pathology from The Laboratory Clinic gave the presentation: “Molecular pathology steadily more important in evaluation of cancer” at Dept. of Radiology, HUH. Dr. Vintermyr showed that his Section at Department of Pathology now runs more than 5500 molecular analysis per year. He showed some practical examples of the workflow of these analyses in his Section, and especially did point out the close integration between morphology and the running performance of such analysis. Molecular analysis are becoming more and more important for the diagnosis of cancer in pathology and for the increasing demands of predictive molecular analysis related to treatment of cancer. This trend shift in modern pathology already involves all main cancer forms, including those from colon, lung and skin (melanomas). To meet present and forth coming demands in molecular analysis also new and more advanced molecular platforms are needed, including those commonly denoted “next generation sequencing” (NGS).



It has been a nearly logarithmic increase in molecular analyses in Department of Pathology, HUH.

Interview with Dr. Ivan Viola



Ivan grew up in Bratislava in Slovakia, where in 1995 he also started his university education in computer science at the Slovak University of Technology. The Faculty of Electrical Engineering and Informatics was mostly a study on electrical engineering even if the course names sounded like informatics related. Since Ivan was more motivated for informatics he went to Vienna in 1997 to continue studying real informatics there. He took his master in computer graphics with topic on hardware accelerated filtering, supervised among others by Helwig Hauser.

Ivan thereafter continued with his PhD study, supervised by Eduard Gröller, within medical visualization at Vienna University of Technology on a project in collaboration with the company Tiani Medgraph. This company is still in the medical imaging and visualization business, now as part of Agfa Healthcare and TIANI Spirit who are specializing on digital health records and PACS system installation. Ivan's focus in his PhD work can be summarized in the following:

rized in the following:

[Read more Viola](#)

Upcoming events

13. January 2015: Deadline for [Marie Curie Actions](#), funding for exchange and networking.

12. March 2015: Deadline for European Research Council (ERC) [Consolidator Grants](#), which are designed to support excellent Principal Investigators.

15.-16. June 2015: MedViz Conference, Bergen. This event will be organized together with the PET Center at HUH and the MIC research group at Department of Biomedicine, UiB. The main focus will be innovation within medical imaging and visualization.

14.-15. September 2015: VCBM Workshop in Chester, UK, where The Pioneer in “computational medicine” Prof. Denis Noble will be the keynote speaker. All MedViz colleagues are encouraged to submit papers and join the workshop.

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