



Date: September 28th and 29th 2022
Location: HOTEL OLAVSGAARD

Visual Intelligence (VI) Days 2022

Vision

We shall be the lead provider of cutting-edge deep learning solutions for image analysis to answer innovation needs shared across our consortium of corporate and public sector user partners and beyond.

Aim for VI Days

Researchers, user partners, and invited guests gather for knowledge-sharing and updates on the latest Visual Intelligence (VI) research and innovations. We will have a social program with plenty of opportunities for dialogue, interaction, discussions, networking, and socializing.

Pre-Program for the Visual Intelligence Graduate School - VIGS

September 27th

Afternoon gathering of VI young researchers and graduate students to grow transferrable skills, share scientific experiences and get to know each other across institutions and competence. The event will take place at University of Oslo.

Main Program Visual Intelligence Days

September 28th

08:30-09:30 **Registration and coffee**

09:30-09:45 **Welcome and “state-of-the-VI-union”**

Welcome by the Leadership team and greetings from the Research council

09:45-10:30 **Introduction to convolutional neural networks and deep learning**

Chair: Michael Kampffmeyer

10:45-12:00 **User partner VI-related work/results/innovations/processes**

Representatives from our user partners will give 12-15 min presentations of VI-related work, including outcome in terms of results and innovations.

Chair: Line Eikvil

Floris Groesz, Terratec
 Erik N. Steen, GE Vingmed Ultrasound
 Karl Ø Mikalsen, University Hospital of North Norway
 Øyvind Skjæveland, Equinor

12:00-13:00 **Lunch**

13:00-14:15 **Continued user partner VI-related work/results/innovations/processes**

Chair: Anders U. Waldeland

Jan Nygaard, Cancer Registry
 Nils Olav Handegaard, Institute of Marine Research
 Jørgen Agersborg and Sara Björk, KSAT
 Hans Berg Borhaug and Johan Mikkelsen, KSAT

14:30-16:30 **Methodology with potential for transfer and synergies**

This session shows ongoing work on advancing Visual Intelligence research challenges to drive innovations on user partner problems and data. The session will provide inspiration for synergies and transferred across applications.

Chairs: Benjamin Ricaud & Alba Ordonez

Anne Solberg	<i>Exploiting context and dependencies</i>
Fredrik Dahl	Analyzing breast positioning in mammograms with graph convolutional networks
Sarina Thomas	Light-weight spatio-temporal graphs for segmentation and ejection fraction prediction in cardiac ultrasound
Alba Ordonez	<i>Providing interpretable solutions</i>
Kristoffer Wickstrøm	Explaining representations for medical image retrieval
Michael Kampffmeyer	<i>Learning from limited data</i>
Anders U. Waldeland	Seismic analogy retrieval
Robert Jenssen	ShipPointYolo for ship detection
Fred Godtliebsen	<i>Quantifying uncertainty in predictions</i>
Iver Martinsen	SCAMPI: Species Classification Automation for Microfossil Photomicrograph Images
Are Jensen	Self-supervised inspired score values for building-change detection

17:00-19:30 **Spotlights, posters and interaction**

This session highlights VI-relevant work across the consortium. The intention is to mingle and to learn from each other. Each poster is preceded by a brief spotlight presentation.

Chair: Anne Solberg.

20:00 **Dinner in Hotel Restaurant**

September 29th

09:00-09:45 **Continued: User partner VI-related work/results/innovations/processes**
The overall topic of this session is “deep learning/image analysis” in practice from the perspective of the user partners.

Chair: Lars A. Bongo

Stian Rostad, Terratec
Erik N. Steen, GE Vingmed Ultrasound
Karl Ø Mikalsen, UNN

10:00-12:00 **Collaborative work session with user partners**
Work sessions centered around individual user partners.

Chair: Inger Solheim

Structure

- Revisit the Visual Intelligence research plan 2022.
- Brief presentations to review status of ongoing/planned activities.
- Discuss progress and path forward.
- Discuss adjustments to the research plan for 2023.

12:00-13:00 **Lunch**

13:10-14:15 **Inspirational talk by invited speaker: “Lighthouse project DoMore!”**
Prof. Håvard Danielsen (Oslo University Hospital and UiO)

Chair: Andreas Austeng

14:30-16:00 **Summary and outlook**

- Insight into the collaborative work sessions with user partners
- Trends in deep learning
- Visual Intelligence Graduate School summary and recap
- Closing (Director, co-directors)

16:00 **END**

