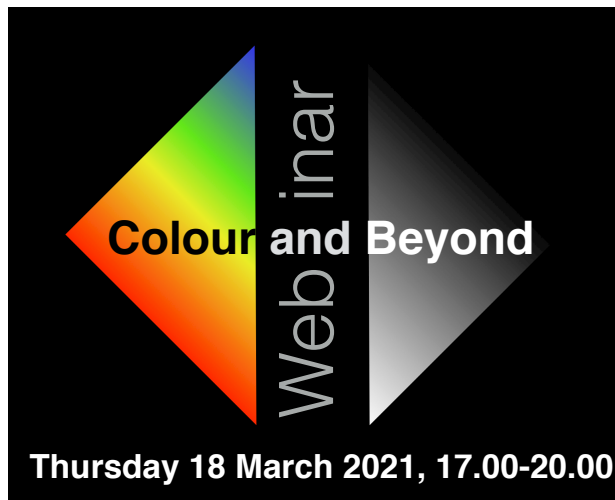


Forum Farge 2021



A webinar organised by Forum Farge in collaboration with the Department of Computer Science and the Norwegian Colour and Visual Computing Laboratory at the Norwegian University of Science and Technology (NTNU).

Webinar Torsdag, 18. mars 2021, KL.17:00-20:00

En webinar arrangert av Forum Farge i samarbeid med Institutt for datateknologi og informatikk og Norsk laboratorium for farge og visuell prosessering ved Norges teknisk-naturvitenskapelige universitet (NTNU).

A broadly conceived, content-rich afternoon workshop dedicated to colour and beyond.

It starts with an introduction to human colour vision and perception, followed by an excursion into the potential of multispectral imaging and visualisation. We continue to explore computational colour constancy and white balance, before the importance of colour in the context of visual communication of information and interaction design are discussed.

An application related to colour wallpaper design is presented and short colour related contributions are expected from Forum Farge members.

Finally, the webinar ends with Forum Farge annual meeting.

PROGRAMME

17.00–17.00	Peter Nussbaum	Opening Forum Farge 2021
17.00–17.20	Rigmor C. Baraas:	Human colour vision
17.20–17.40	Sony George:	Spectral imaging and application
17.40–18.00	Pauline Hardeberg Zimmermann:	Computational colour constancy and white balance
18.00–18.20	Ole Wattne:	Colour in information design
18.20–18.40	Anton Strand:	Colour wallpaper design
	Break	
19.00–19.30	Forum Farge members 15' Contributions*	<ul style="list-style-type: none">• Professor Jon Yngve Hardeberg, NTNU Gjøvik, “<i>ApPEARS and CHANGE</i>”• Associate Professor Elise Dees Krekling, University of South-Eastern Norway Campus Kongsberg, “<i>Red-green colour vision deficiencies – vocational requirements and colour vision testing</i>”
19.30–20.00	Forum Farge årsmøte	
20.00–20.05	Peter Nussbaum	Closing Forum Farge 2021

* Forum Farge members contribute with 15' presentation about a colour related topic.

Please, note that the programme is subject to change, and will be updated continuously up to the webinar.

PRESENTERS AND TALK SUMMARY



Professor Rigmor C. Baraas, Faculty of Health and Social Sciences, Department of Optometry, Radiography and Lighting Design, University of South-Eastern Norway Campus Kongsberg. She is the director of research at the National Centre for Optics, Vision and Eye Care and head of the Colour Vision and Retinal Imaging laboratory. She is an expert in human colour vision, the development of the eye and refractive errors.

Talk summary:

In her talk she will give an up-to-date overview of human colour vision including the variability in colour vision observed among persons with normal and congenital colour vision deficiency.



Dr Sony George is currently an Associate Professor at The Norwegian Colour and Visual Computing Laboratory, Norwegian University of Science and Technology since 2017. Before joining NTNU, he worked as a researcher at Gjøvik University College Norway. Sony obtained a Ph.D. in Photonics from the Cochin University of Science and Technology, India, in 2012. He has been involved in several national and EU projects multiple roles, including EU MSCA-ITN projects HiPerNav and CHANGE. His primary research focus is in application of spectral imaging for cultural heritage, food, and forensics.

Talk summary:

Spectral imaging is a technique that combines the power of spectroscopy and imaging. This technology has received wide acceptance in recent years due to the improved performance on solving many computer vision tasks in a better way compared to the conventional 3 channel imaging. In his presentation, Sony will start with an introduction to spectral imaging, different techniques in acquisition such as multispectral, hyperspectral imaging and analysis. Some of the application areas of spectral imaging such as cultural heritage digitisation, food quality inspection, forensics etc. will be discussed in his presentation too.



Pauline Hardeberg Zimmermann is a PhD student at the Department of Computer Science, NTNU. She is working with the Colourlab at NTNU Gjøvik and the Department of Electronic Systems at NTNU Trondheim. The goal of her cross-campus research project is to develop an imaging based approach to documenting skin bruises. She is also involved in developing and teaching a new course in introductory electronics. Before starting the PhD, she was enrolled in a signal processing dual degree program with NTNU Trondheim and Technische Universität Berlin.

Talk summary:

Human color constancy is our astounding ability to perceive the color of objects or surfaces to be constant even though the illumination changes. There have been many attempts to replicate this effect in machines. These attempts are collectively referred to as computational color constancy (CCC). Automatic white balance is the implementation of CCC in digital cameras.

The vast majority of CCC research is based on illumination estimation: estimating the illumination and correcting the colors accordingly. Two of the most well-known CCC methods are called grey world and white patch. Both methods are based on illumination estimation and inspired by human vision research.

PRESENTERS AND TALK SUMMARY



Ole E. Wattne is a PhD student and assistant professor, Department of Design, Faculty of Architecture and Design, NTNU. His research is related to the design of wayfinding systems and specifically how knowledge from multiple research fields influences design decisions and design interventions in such systems. He has been teaching information graphics, information architecture, interaction design, wayfinding systems and graphic design for bachelor and masters students.

Talk summary:

Good information design makes complex information clear with the needs of users in mind. In this context colours are often functional and used with clear intentions. Colour can be an effective and aesthetic tool in the hands of the information designer and for the reader of the information at hand. In this lecture we will look at some principles, limitations and historical and contemporary examples of colour applied in the specialised field of information design.



Anton Strand is a sales & Business Manager LFG at Norway Canon Norge As. He is an experienced Application Development Manager with a demonstrated history of working in the business supplies and equipment industry. Skilled in Print Management, Sales, Managed Print Services, Business Development, and Marketing Strategy. Strong sales professional graduated from BI.

Talk summary:

New technologies and new use of old technologies sometime reveals new business opportunities. That's also valid for printing. Trends in the interior and décor market changes very fast. How can interior architects take use of printing technology to enrich and live their ideas? What new business opportunities are being unleashed? Anton will in his presentation share his ideas how wall covering can be printed. How to cooperate with the creatives to secure quality according to the industry standards. The ability to reproduce consistent colours becomes crucial. He will also talk about reconstruction of old wall papers and décor with new technology.

The **Department of Computer Science (IDI)** conducts research in the fields of: artificial intelligence (AI), big data, computer architecture, computer graphics, computer security, databases, human computer interaction (HCI), information systems, operating systems, software engineering, and search—to mention but a few.

The **Norwegian Colour and Visual Computing Laboratory** was established in 2000, initially to serve the increasing need for colour management solutions in the printing and graphic arts industry. Since then it has become an internationally leading research and educational institution within colour imaging science.

Påmeldingsfrist: 16. mars 2021:

For registrering se:

www.forumfarge.no

(Zoom linken sendes til registrerte deltakere umiddelbart)

Ytterligere informasjon, kontakt:

Peter Nussbaum [peter.nussbaum@ntnu.no · 97 85 28 15]

All welcome, with no cost.

The link to the Zoom webinar will be provided to attendees who sign up.

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