



## **NORBIS Summer School 2017**

Communicating research by visualisation, illustration and storytelling.

Bergen, 28. August – 1. September

### **Summary**

Most students within the NORBIS network will during their career work with large and complex data sets, which may result from biological measurements, computational simulation and/or analytical modelling. Being able to translate complicated research into information that can be interpreted, and even understood by a wide range of audiences, is an important skill that will help you throughout your career.

During this summer school, you will learn how to get a better insight into your data through scientific visualisation. Based on this, you will create a scientific illustration that effectively communicates a selected aspect of your research. You will further be coached in oral communication of your research, and finally present your project and illustration for the other participants in a ‘Researcher Grand Prix’ style mini symposium.

### **Course modules**

#### *Scientific visualisation:*

Computer-based visualisation systems provide visual representations of datasets, intended to help users carry out their tasks more effectively and efficiently. In many disciplines, there is a need for visualisation to help explore, analyse, and present information. Information here could be different types of data, such as measurements, simulation results, but also mathematical models of structural- and systems biology. Visualisation is successfully employed in industry and academia in a variety of domains, such as biology, medicine, engineering, and the humanities. Additionally, visualisation has become indispensable when presenting scientific results, such as through the use of figures in papers and presentations. During these sessions, you will learn about basic visualisation principles, gain an overview of different visualisation techniques, and learn how to apply these in a useful way in your own work.

#### *Scientific illustration*

After learning how to best visualise complex research data, you will now learn how to communicate your results further. Amongst the many effective communication tools at our disposal, illustration is an ideal option. Visually representing research gives the

audience an additional perspective. Illustrations tell stories in ways that text cannot, and thus makes complex information more accessible. Illustration itself is also a relatively low-cost, time effective option that can be distributed easily. During these sessions, you will learn practical tools to be able to translate your research into a digital illustration. You will further learn the essentials of graphic design and visualisation theory, drawing by hand and drawing digitally. These new theoretical and technical skills will be combined to create an image from a selected aspect of your PhD research.

#### *Scientific presentation*

By now, you have pretty good tools to communicate a research finding to your colleagues or even the general public. This session will discuss what good communication means, why storytelling is important and where it may lead. You will receive useful tips and hints on how to present your research and how to make it more relevant for an audience. Based on your illustration made during the previous sessions, you will now be coached in the preparation of a short talk, which will ultimately be presented to all participants in a 'Researcher Grand Prix' style mini symposium on the last day of the summer school.

### **Contributors**

#### *On visualisation:*

**Noeska Smit** is an associate professor in the Visualisation group at the Department of Informatics, UiB, and is a specialist on medical visualisation of heterogenous anatomical data.

**Jan Byska** is a post doc in the Visualisation group at the Department of Informatics, UiB, and specialises on visualisation of molecular biology data.

#### *On illustration:*

**Pina Kingman** has a Master degree in Biomedical Communications, and is currently employed at the Department of Informatics, UiB. Pina is an award-winning animator and film maker, and focuses on telling scientific and medical stories so that the information is accessible to any audience; [www.pinakingman.ca](http://www.pinakingman.ca).

#### *On oral communication:*

**Synnøve Vindheim Svardal** works as a communication advisor at the Communication division, UiB. She is in the mentoring panel of the local Researcher Grand Prix during the Science festival in Bergen and has long standing experience on how to communicate a message.

#### *Organiser:*

**Christine Stansberg**, NORBIS coordinator

### **Work load**

The school constitutes one full week of lectures and practicals. Participants are expected to spend two days preparatory work prior to the school, and two days to

finish the illustration after the school. The Department of Informatics at UiB recommends that participation at the summer school is accredited with 3 ECTS credits. Participants must apply to their respective universities in order to have the course formally approved as part of their PhD education

### **Prerequisites**

Laptop with Adobe Illustrator (NORBIS will cover a one-month license).

### **Practical information**

Register here: <https://goo.gl/forms/dKzPWUCvLMQEZUpd2> by June 8. We have a limited number of seats available. Everyone is welcome to apply, NORBIS members will be prioritised.

Attendance at the NORBIS summer school is free of charge (and heavily subsidised by the Research Council of Norway). We will cover travel and accommodation for all NORBIS student members. See [norbis.no/admission-to-the-school](http://norbis.no/admission-to-the-school) for information on how to apply for membership.

### **For further enquiries, please contact**

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