

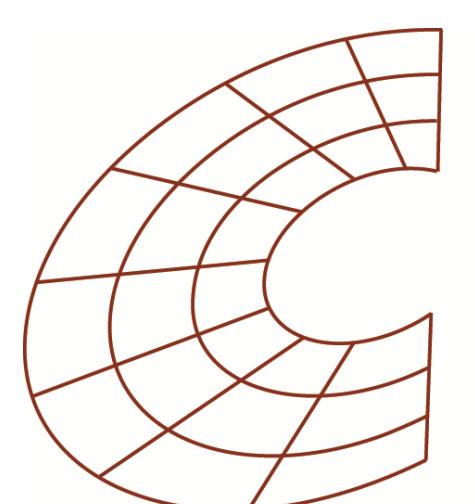
*Free and Open Source Software for  
Geoinformatics in Norway*



**asplan viak** **internet**

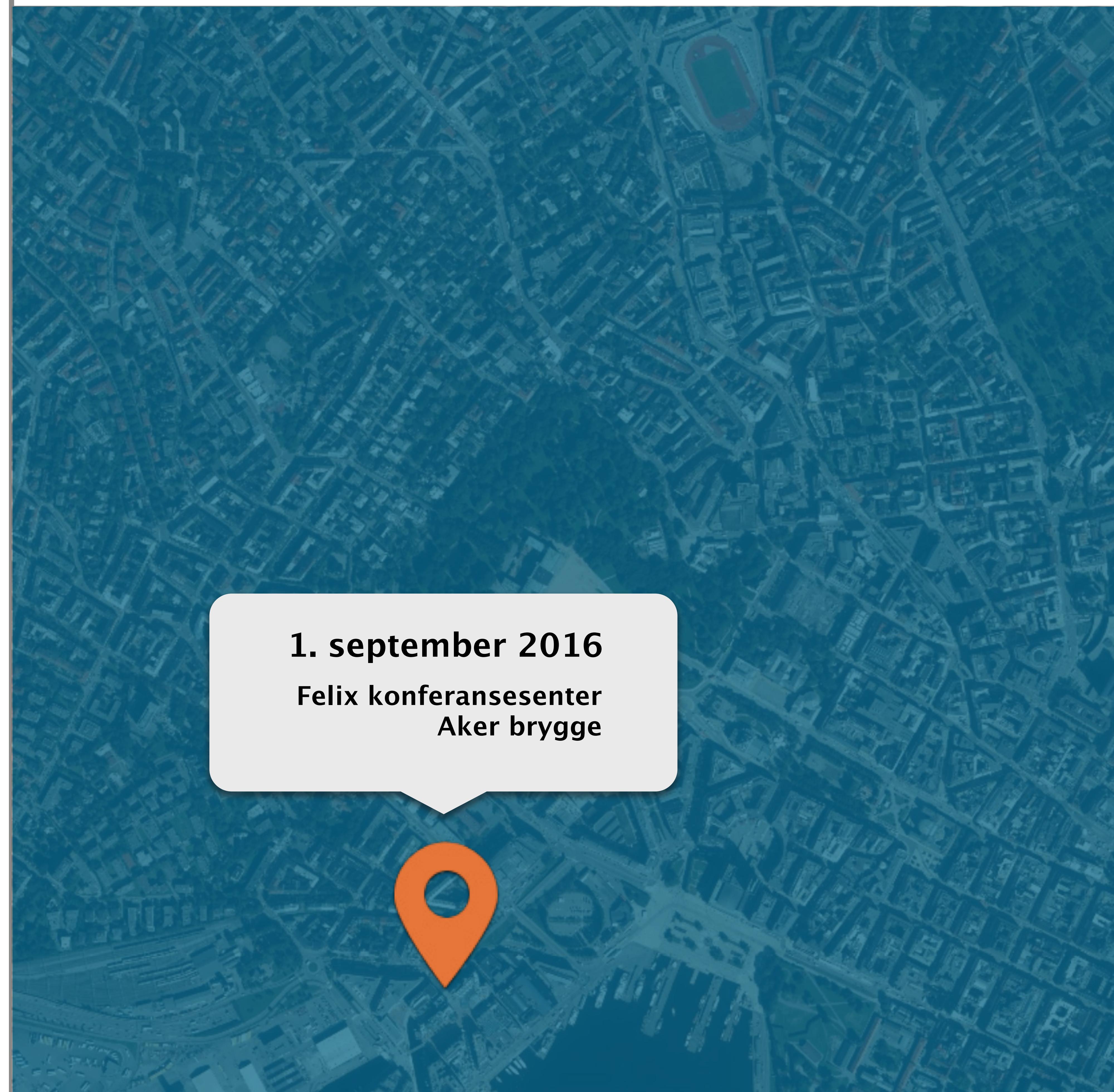


**KYSTVERKET**



**GeoForum**  
Organisasjon for geomatikk

**FOSS4G - NORGE**



**1. september 2016**  
**Felix konferansesenter**  
**Aker brygge**

# Welcome

FOSS4G in Norway has been arranged for some years now, but it's only the second time that students are in charge of the conference.

We are very happy to be able to participate in the open source community in Norway, and we have had a lot of fun arranging the conference.

This year's programme consists of both technical talks about specific cases where open source software have been used, talks about how open source projects can be run successfully and also talks about how open source affects our society.

We hope you enjoy the conference!

Best regards,  
The FOSS4G-NOR Programme Committee

## Programme committee



**Anne Sofie Strand Erichsen**  
Student NTNU



**Mathilde Ørstavik**  
Student NTNU



**Marie Senumstad Sagedal**  
Student NTNU



**Nina Tandrevold Hermanrud**  
Student NTNU



**Sverre Wisløff**  
Norkart



**Alexander Salveson Nossum**  
Norkart



**Robert Nordan**  
Norkart



**Atle Frenvik Sveen**  
Norkart

# Programme

| Tid  | Foredragsholder                 | Tema   | Språk   |
|--|---------------------------------|--|---------|
| Kaffe og mingling (8:30 - 9:00) <i>Coffee and mingling</i> |                                 |  |         |
| 09:00  |                                 | Velkomst v/ programkomiteen<br><i>Welcome from the programme committee</i>   | English |
| 09:15  | Anita Graser<br><b>QGIS</b>     | QGIS - Et samfunnsdrevet GIS-prosjekt<br><i>QGIS - A community-powered GIS Project</i>   | English |
| 10:15  | Knut Ole Sjøli<br>MAPIC         | MAPIC<br><i>Cloud powered project tool with advanced visualization and easy sharing of vector- and raster data</i>                                   |         |
| 10:35  | Rune Aasgard<br>Norkart         | Egenskapsdeteksjon i flybilder vha konvolusjonsbaserte neurale nett<br><i>Fully convolutional neural networks for aerial image feature detection</i> | English |
| Pause (10:50 - 11:10) - Break                              |                                 |  |         |
| 10:10  | Bo Overgaard                    | Open Source fra et forretningsperspektiv<br><i>Open source from a business perspective</i>   | English |
| 11:30  | Iván Sánchez Ortega<br>Mazemap  | Adressering av NSFW geodetiske rutenett<br><i>Addressing NSFW Geodesic Grids</i>   | English |
| 11:50  | Sveinung Engeland<br>Kartverket | Når staten åpner dørene for hackere<br><i>When the state open their doors for hackers</i>  | Norsk   |

*"Free software' is a matter of liberty, not price. To understand the concept, you should think of 'free' as in 'free speech,' not as in 'free beer.'*  
-Richard M. Stallman

| Tid                           | Foredragsholder  | Tema  | Språk   |
|-------------------------------|--|---|---------|
| Lunsj (12:00 - 13:00) - Lunch |  |   |         |
| 13:00                         | Jan Kristian Jensen<br>Vegvesenet                        | Gjøre kule ting med data fra Nasjonal Vegdatabank (NVDB)<br><i>Cool things with Norwegian National road data base</i> | English |
| 13:20                         | Nicklas Avén<br>FeltGIS                                  | NoTile - Forslag til arbeidsflyt og kartklient<br><i>NoTile - Suggestion of a workflow and mapclient</i>              | English |
| 13:40                         | Students   | Hva får studenter til vha Open Source<br><i>What are the results when students use Open Source?</i>                   | English |
| 14:00                         | Martin Koksrud Bekkelund                                 | Tittel kommer snart<br><i>TBA</i>   |         |
| Pause (14:15 - 14:30) - Break |  |   |         |
| 14:30                         | Lars Aksel Opsahl<br>NIBIO                               | Postgis topologi vil erstatte "Simple feature"(OGC)<br><i>Postgis Topology will replace simple feature (OGC)</i>      | English |
| 15:00                         | Robert Nordan<br>Norkart                                 | Reisebrev fra FOSS4G i Bonn<br><i>Summary from FOSS4G in Bonn</i>   | English |
| 15:30                         | Avslutning v/ programkommitéen<br><i>Closing session</i> |   | English |

# Overview of presentations

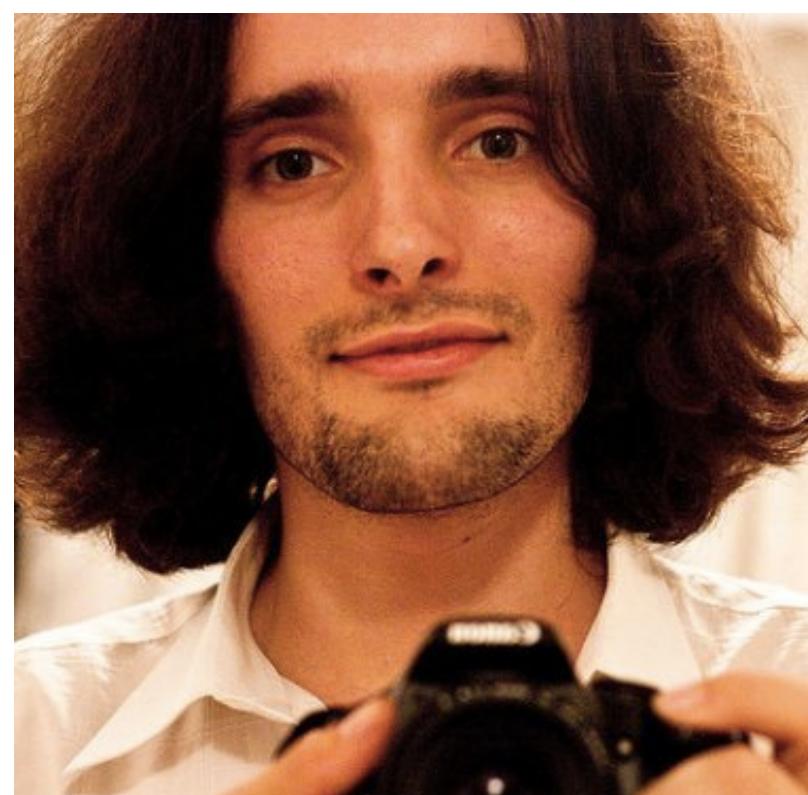
## ***QGIS - A Community-powered GIS Project***



**Anita Graser**

Anita Graser provides first-hand information about the inner workings of the QGIS project, one of the most successful open source GIS projects. She presents currently ongoing and planned developments as well as the latest features.

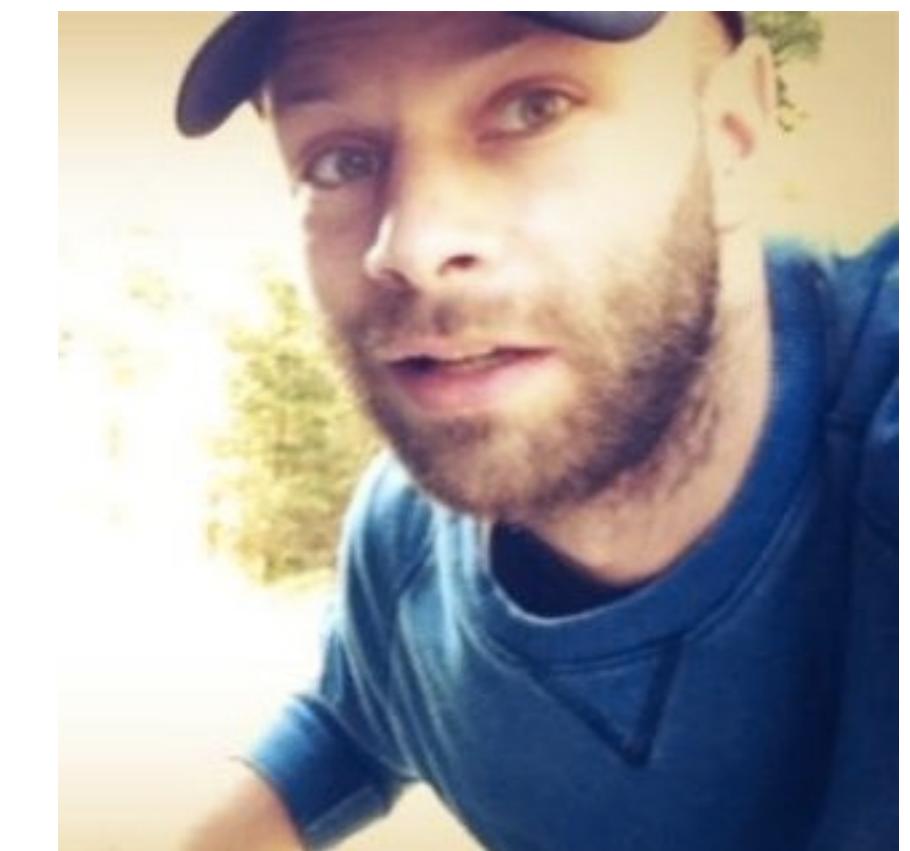
**Due to problems with visa, Vladimir is unfortunately not able to come to Norway and attend the conference.**



**Vladimir Agafonkin**

***Cloud powered project tool with advanced visualization and easy sharing of vector- and raster data.***

Knut will talk about how open-source tools can be pushed to the limit and beyond in the service of vector- and raster visualizations in the cloud.



**Knut Ole Sjøli**

## ***Fully convolutional neural networks for aerial image feature detection***



**Rune Aasgaard**

Deep convolutional neural networks have recently shown great promise for feature detection in images. The presentation contains an introduction to the mathematical theory behind machine learning and neural networks, and shows examples of implementation using the open source library Theano. Python, QGIS and GDAL are also used for data preparation and display.

## ***Open source from a business perspective***



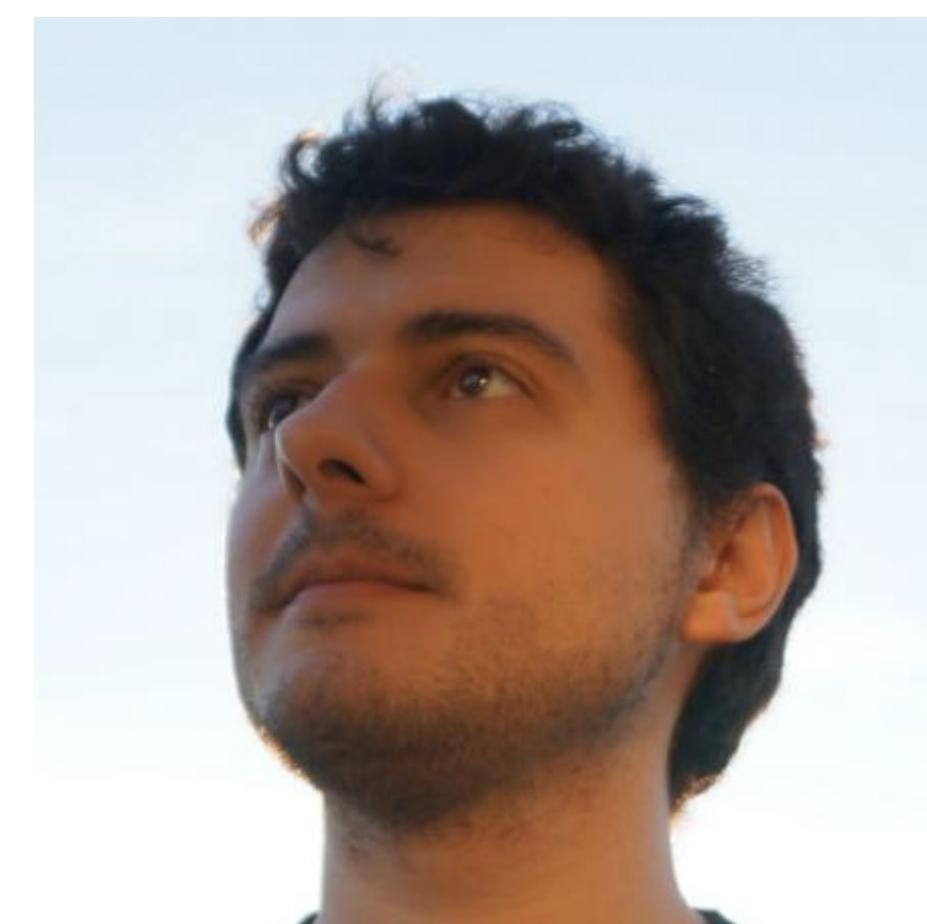
**Bo Overgaard**

The start-up company Septima use and contribute to open source projects. The CEO Bo Overgaard will share his experience on how to build a solid business with extensively use of open source.

## ***Addressing NSFW Geodesic Grids***

There has been a recent interest in our industry in using geodetic grids to provide addressing schemes.

As a hobby project, Iván has been working on what3fucks (NSFW), and he'll share his newly-found insights about geodesic grids, computational geometry, patent law, tectonic drift, and whether algorithmic addresses are a good idea.



**Iván Sánchez  
Ortega**

## ***Når staten åpner dørene for hackere***

Kartverket og en lang rekke andre offentlige etater sitter på en gullgruve av data som faktisk er gratis og fritt tilgjengelig for alle. Men hvordan finner man gullet og hvordan får man det ut av gruvegangene og i bruk - slik at det kan omgjøres til nyttige tjenester, forretningsideer og arbeidsplasser?

Prosjektleder Sveinung Engeland gir noen av svarene og redegjør for årets store hackathon med åpne offentlige data, #hack4no, som er ett av flere tiltak for å gjøre åpne offentlige data mer tilgjengelige.



**Sveinung  
Engeland**

## ***Cool things with Norwegian National road data base***



**Jan Kristian  
Jensen**

Explore the possibilities of the Norwegian National road data base! Jan will present various services, API's, data sets - and the methods to use them efficient, and what pitfalls to avoid.

## **NoTile - Suggestion of a workflow and mapclient**



**Niclas Aven**

Nowadays most "hot" mapping solutions uses tiled map data. This is very convenient from a rendering perspective, but it has some cons when it comes to flexibility in handling data. Spatial data also tend to be handled in a very unnormalized way. All data and geometries that relates gets thrown together.

Niclas will talk about the attempt to get something where data at the client is handled in a relational way. The project is very young, but some core parts can be shown and discussed. Licensing is still an open question, but it will of course be open source."

## **What are the results when students use open source?**



**Students**

The students will present projects where they have used open source, and talk about use of open source at university.

## **Postgis Topology will replace simple feature**

Using Simple Feature map data from a client to update a polygon object in a database will normally cause 99% of the points to be moved incorrectly. This again means that wrong overlap and tiny areas of missing coverage for layers that are supposed to have a 100% coverage and non overlap, occur. We will explain why points are moved incorrectly and how we can solve this problem by using Postgis Topology.



**Lars Aksel Opsahl**



**Martin Koksrud  
Bekkelund**

**TBA**

Info about the talk will be added soon.

## *Summary from FOSS4G in Bonn*



**Robert Nordan**

I det som begynner å bli farlig nærme en tradisjon, får vi servert inntrykk fra FOSS4G i det store utland. Vi ser på stedets særegenheter, beliggenhetens innvirkning på deltagermassen og årets trender i foredragene, alt sett fra perspektivet til en nordmann på tur.