Welcome to the master program at the Department of Informatics

Research groups and course portfolio for the master program in Informatics: design, use and interaction

First information, 5 July 2017
Agenda

- Welcoming week
- Research topics and potential supervisors
- Courses to take this fall
- Summary and contact information
Welcoming week

- All information available here: http://www.mn.uio.no/ifi/english/studies/news/events/aug17.html

- The first week you will:
  - Meet your buddies in the only master level buddy program at Ifi
  - Be introduced to the two research groups, our courses, and the available master theses
  - Select your courses – the signup deadline is one day after your first meeting with us!
The Buddy Program!

**The Week (16/8 - 18/8)**

**Wednesday**
- 10.00 - 11.30: Design intro
- 11.45 - 18.00: Master intro
- 18.00: Social

**Thursday**
- 10.00 - 16.00: Master intro
- 16.00: Social

**Friday**
- 10.15 - 15.45: Master intro
- 16.00 - 19.00: Design BBQ
- 19.00: CTRL + ALT + DEL Party
Cabin Trip

- Cabin trip for all students in our master program, including the PhD students and the lecturers

- This trip will have some master related content as well as social activities

Save the date: Wednesday - Thursday, 11-12 October 2017
Our master program
Information Systems Research Group

Kristin Braa  Sundeej Sahay  Jørn Braa  Jens Kaasbøll  Bendik Bygstad  Margunn Aanestad  Ole Hanseth

Petter Nielsen  Johan Sæbø  Terje Sanner  Bjørn E. Mørk  Miria Grisot  Troels Mønsted

+30 PhD students

Eric Monteiro

+20 HISP scientific programmers/engineers/coordinators/etc.
Research Focus: Large Scale and Complex Information Systems

Open Source
Flexible
Socio-Technical
Architectures
Platforms
Information Infrastructures

Global Health
- HISP/DHIS2
- WHO, UNICEF, Norad, PEPFAR
- Ministries of Health in developing countries

Norwegian Healthcare
- Helse Sør-Øst
- Direktoratet for e-Helse
- Oslo kommune (and others)
Research Focus: Large Scale and Complex Information Systems

- Understanding processes of
  - Scaling and sustainability
  - Integration
  - Architecting
  - Standardization
  - Organizing/governance/collaboration
  - Open Source software development

- Qualitative empirical studies

- Action research - software development and implementation
Design: research

interaction mechanisms
robot-human interaction (HRI)
tangible & embodied interaction (TEI)
Internet-of-Things (IoT)
gamification

extreme users
use in difficult environments
users with “other” capabilities
non-users

design: research
participatory design
research-through-design
critical research

smart & sustainable
sustainable technology development
energy transition & sustainable societies
participatory culture
smart cities

MECS: Multi-sensor Elderly Care Systems
Completing the master’s degree
Master thesis

Structure

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
<th>ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>4th semester (V2019)</td>
<td>Master thesis</td>
<td>10 ECTS</td>
</tr>
<tr>
<td>3rd semester (H2018)</td>
<td>Course, Master thesis</td>
<td>10 ECTS</td>
</tr>
<tr>
<td>2nd semester (V2018)</td>
<td>Course, Course, Master thesis</td>
<td>10 ECTS</td>
</tr>
<tr>
<td>1st semester (H2017)</td>
<td>Course, Course, Course</td>
<td>10 ECTS</td>
</tr>
</tbody>
</table>
## Master thesis

### Structure

<table>
<thead>
<tr>
<th>4th semester (V2019)</th>
<th>Master thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd semester (H2018)</td>
<td>Master thesis</td>
</tr>
<tr>
<td>2nd semester (V2018)</td>
<td>Course</td>
</tr>
<tr>
<td>1st semester (H2017)</td>
<td>Course</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4th semester (V2019)</th>
<th>Master thesis</th>
</tr>
</thead>
<tbody>
<tr>
<td>3rd semester (H2018)</td>
<td>Course</td>
</tr>
<tr>
<td>2nd semester (V2018)</td>
<td>Master thesis</td>
</tr>
<tr>
<td>1st semester (H2017)</td>
<td>Master thesis</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>10 ECTS</th>
<th>10 ECTS</th>
<th>10 ECTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 ECTS</td>
<td>10 ECTS</td>
<td>10 ECTS</td>
</tr>
</tbody>
</table>
Master thesis

But before you decide on your structure...

You should start by looking at the various research topics under which you could write your thesis, because:

1. The structure of your master study has to be planned with a thesis supervisor

2. And depending on which research topic you want to write for, specific courses will be mandatory

3. For courses with limited capacity, the students who have been in contact with a relevant research topic will be prioritized

This is the main purpose of this presentation:

- Giving you a brief overview of available research topics and the types of theses available

- Helping you pick your courses the first semester by listing mandatory and recommended courses for different research topics
DESIGN-GROUP
RESEARCH AREAS
Research topic

**MECS: Robots at Home for elderly people**

Overarching research areas:

- MECS – Multimodal Elderly Care System; Research Council funded project; Robotics group and DIS group
- 2016 – 2019; two PhD positions, one Post Doc position and Master students
- Understanding elderly people at home – user studies, evaluation studies
- Human – Robot – Interaction
- Universal design
- Technology evaluations at home

Other information:

- This topic is suitable for students working in groups or collaborating
- Bot user studies, evaluation, working together with elderly on design and evaluation

Mandatory courses:

- NIL

Contact person:

Jo Herstad
johe@ifi.uio.no

Potential supervisors:

Diana Saplacan
dianasa@ifi.uio.no

Rebekka Soma
rebsaurus@ifi.uio.no

Tone Bratteteig
tone@ifi.uio.no

Jo Herstad
johe@ifi.uio.no
Research topic

Extreme users

Topic:
- Users with “other” capabilities – in particular lack of capabilities that an IT solution presupposes
  - Physical challenges (which interaction mechanisms can be used instead?)
  - Cognitive challenges (how can abstract and/or complex information be communicated? (visualisations, haptic, tangible, automation)
- Use in difficult environments (outdoors, in the home, in hospitals etc.)
- Non-users of IT: why and how? What do they do instead? Can alternative interaction mechanisms be used (and how)?

Overarching research areas:
- Participatory and experimental design with users
- Themes: Prototyping, interaction design, information visualisation, TI, HRI, automation levels

Other information:
- This thesis is best suited for students speaking a Nordic language because of the extended user collaboration
- This topic is suitable for students working together or as a group

Mandatory courses:
- INF5722 and INF4060 (if not previously completed)
- Recommended: INF5591, INF5261, INF5205
Research topic

Tangible, embedded, and embodied interaction

Overarching research areas:

- Tangible, embedded, and embodied interaction
- Phenomenology and theories of the body
- Physical design and prototyping

Other information:

- This topic is suitable for students working in groups or collaborating
- This topic is best suited for those who are familiar with physical design (e.g., Arduino and Raspberry Pi)

Mandatory courses:

- INF5205, INF5591, and INF4060 (if not previously completed)

Examples of completed theses topics:

- Intuition of balance: A framework for understanding balance as input for personal mobility devices
  DUO: https://www.duo.uio.no/handle/10852/49590

- Exploring tangible interaction: Alternative interfaces for assisting elderly users
  DUO: https://www.duo.uio.no/handle/10852/47649

Contact person:
Suhas Govind Joshi
joshi@ifi.uio.no

Potential supervisors:
Suhas Govind Joshi
joshi@ifi.uio.no
Rebekka Soma
rebsaurus@ifi.uio.no
Alma Culén
almira@ifi.uio.no
Jo Herstad
johe@ifi.uio.no
Research topic
Embodied Musicality

Overarching research areas:

- Embodied interaction
- Musicality – using sound and music as input or output for embodied interactions or expressions
- Physical design and prototyping

Other information:

- This topic is suitable for students working in groups or collaborating
- This topic is best suited for those who are interested in either musicality or physical design (e.g., Arduino and Raspberry Pi)
- Special curriculum will be made available upon request

Mandatory courses:

- INF5205, INF5591, and INF4060 (if not previously completed)

Contact person:
Suhas Govind Joshi
joshi@ifi.uio.no

Potential supervisors:
Suhas Govind Joshi
joshi@ifi.uio.no

Rune Rosseland
runebro@ifi.uio.no

Alma Culén
almira@ifi.uio.no
Research topic

SMART: Sustainable Technology Design

Overarching research areas:

- Sustainable design and use
- Critical Design
- Physical design and prototyping

Other information:

- We will create a supportive environment (seminars, films, etc.) for all master students with sustainability-related projects

Mandatory courses:

- INF5011, INF4060 (if not previously completed)

Recommended courses:

- INF5205, INF5591, INF5261

Contact person:
Maja van der Velden
majava@ifi.uio.no

Supervisors:
Maja van der Velden
majava@ifi.uio.no
Hanne Cecilie Geirbo
hannege@ifi.uio.no
Research topic

Cool technology for young patients (KULU)

Overarching research areas:

- Cool design
- Participatory design
- Prototyping

Other information:

- KULU research project: http://www.kulu.no

Mandatory courses:

- INF5722, INF4060 (if not previously completed), INF5011 or INF5200

Recommended courses:

- INF5205, INF5591, INF5261

Examples of completed theses:

- Sprinklr: Designing a ‘cool’ health-oriented social networking site with and for teenagers
  https://www.duo.uio.no/bitstream/handle/10852/37422/Machniak_Master.pdf

- See kulu.no for all master theses written in the KULU project

Contact person:
Maja van der Velden
majava@ifi.uio.no

Supervisors:
Jorunn Børsting
jorubo@ifi.uio.no

Maja van der Velden
majava@ifi.uio.no
Research topic

Smart cities - design for urban living

Topics:
- Production and consumption of electricity
- Visualization and use of data gathered through sensors in urban environments (e.g., traffic, air quality...)
- Cities as information infrastructures

Overarching research areas:
- Design for the city (energy, transport, air quality, etc.)
- CSCW, theory of infrastructure
- Prototyping

Other information:
- This topic is suitable for students willing to work with a high degree of independence
- Possibility to focus on other themes within design for the city

Examples of theses:
- Platform infrastructure as a driver of smart city development (Spring 2017)
- User-Centered design and development of a gamified hybrid mobile application With the goal of encouraging eCar owners to share charging points (Spring 2017)
- Supporting electricity production – creating electricity pro-sumers (Spring 2018)

Recommended courses:
- INF5011, INS5210, INF5722, INF5261

Contact person:
Hanne Cecilie Geirbo
hannege@ifi.uio.no
Tone Bratteteig
tone@ifi.uio.no

Potential supervisors:
Tone Bratteteig
tone@ifi.uio.no
Hanne Cecilie Geirbo
hannege@ifi.uio.no
Research topic

Information architecture, gamification, privacy

Overarching research areas:

- Persuasive technologies, designing for motivation
- Web publishing systems, semantic web, metatags, SEO
- Web application design, user centered design and prototyping, interaction design
- Privacy enhancing technologies, power of platforms, political technologies, design ethics

Other information:

- This topic is suitable for students working in groups or collaborating
- This topic is suitable for students who want to work with the Drupal WCMS (Web Content Management System)

Recommended courses (boldface is mandatory):

- INF5272, INF5591, INF4060, INF5261, INF5722, INF5011, INF5200

Examples of completed theses topics:

- The Design of Educational Games: Enki
  DUO: https://www.duo.uio.no/handle/10852/47803
- Privacy by Design: Adding Privacy to Publishing Platforms
  DUO: https://www.duo.uio.no/handle/10852/37434

Contact person:

Gisle Hannemyr
gisle@ifi.uio.no

Potential supervisors:

Gisle Hannemyr
gisle@ifi.uio.no
Alma Culén
almira@ifi.uio.no
Tone Bratteteig
tone@ifi.uio.no
Jo Herstad
johe@ifi.uio.no
Specific master theses

A list of available theses will be posted here before we meet you in August:

http://www.mn.uio.no/ifi/studier/masteroppgaver/design/

http://www.mn.uio.no/ifi/studier/masteroppgaver/is/

PS. Do not worry about older dates, all listed theses are still relevant and will be updated soon!
COURSES
Intensive course vs. regular course

Intensive courses

- Runs through a whole semester worth of teaching in just five weeks
- Always requires full-time commitment (80% participation)
- Includes mandatory activities and presentations during the course
- May require a report to be submitted after the five weeks
- Completion rewards 10 ECTS credits

Regular courses

- Runs through the whole semester (typically 15 weeks)
- May have participation requirements
- Involves a regular oral and/or written final exam
- Completion rewards 10 ECTS credits
List of courses – fall 2017

Intensive courses

- INF5011/INF9011 – Technology Society Ethics *(Maja van der Velden)*
- INF5205/INF9205 – Advanced Topics in Design of Information Systems *(Suhas Govind Joshi)*
- INF5591/INF9591 – Advancements in interaction design *(Alma Leora Culén)*
- INF5850/INF9850 – ICT for Development: Building a Better World? *(Sundeep Sahay and Johan Ivar Sæbe)*

Regular courses

- INF4060 – Interaction Design *(Alma Leora Culén)* – Note: This course is only intended for students who have not previously completed INF2260
- INF5261/INF9261 – Development of mobile information systems and services *(Jo Herstad)*
- INF5722/INF9722 – Experimental design of IT *(Guri Verne)*
- IN5210 - Information infrastructure *(Petter Nielsen)*
- INF5750 - Open Source Development *(Olav Poppe)*
INF5722
Experimental Design of IT

Teaching and projects

- Lectures and exercises twice a week
- Additional work in projects is necessary
- Group-based projects (3-4 per group)
- Course capacity: maximum of 24 students – Design students get priority
- 10 ECTS

Themes and curriculum

- Experimental (and Participatory) Design of Information Systems – exploring different design ideas
- Including future users in the design process
- Design workshops, prototyping

Assignments and exam

- Four mandatory assignments: project plan, paper presentation, mid term presentation, final presentation.
- Report and oral exam makes up the grades
- Grade: Scale from F to A.

Contact person:
Guri Verne
guribv@ifi.uio.no
INF5011

Technology Society Ethics

Teaching and projects

- 80 % mandatory participation required
- Group-based projects (3-4 per group)
- Course capacity: unlimited
- 10 ECTS

Themes and curriculum

- Exploring the relation between technology and society
- Understanding and addressing ethical challenges in technology design and use
- Weekly activities: film, discussions, presentations, guest lectures, workshops
- Themes: drones, sustainability, mobile phones

Assignments and exam

- Weekly mandatory assignments and presentations
- Written essay and oral exam (final presentation)
- Grade: A to F

Dependencies:
No prior course requirements. Good course for master students in their 3rd semester.

Contact person:
Maja van der Velden
majava@ifi.uio.no
Advanced Topics in Design of Information Systems

Teaching and projects

- Intensive five-week course running from 28. August – 29. September
- 80 % mandatory participation required
- Group-based projects (3-4 per group)
- Course capacity: maximum of 12 students
- 10 ECTS

Themes and curriculum

- Tangible, embedded, and embodied interaction
- Rapid prototyping, hardware prototyping, material prototyping
- Presentation activities: exhibition, presentations, design critic sessions

Assignments and exam

- Weekly mandatory assignments and presentations
- Oral exam and final exhibition
- Grade: pass/fail

Dependencies:
To take this course you must have completed the following course:
INF2260/INF4060

Contact person:
Suhas Govind Joshi
joshi@ifi.uio.no
INF5261
Development of mobile information systems and services

Teaching and projects
- Lectures and exercises once a week
- 80% mandatory participation required
- Group-based projects (3-5 per group)
- Course capacity: all welcome
- In this course, there will also be a focus on writing articles and reports
- 10 ECTS

Themes and curriculum
- Personal mobility, user mobility, terminal mobility, micro mobility, local mobility.
- Context aware computing, wearable computing
- Understanding user activities and user context – user studies
- Prototyping – and evaluation of prototypes
- Writing an article – and report

Assignments and exam
- Mandatory assignments and presentations
- Oral exam
- Grade: pass/fail

Contact person:
Jo Herstad
joshe@ifi.uio.no
Advancements in Interaction Design

Teaching and projects

- Intensive five-week course running from 3. October – 4. November
- 80 % mandatory participation required
- Group-based projects (3-4 per group)
- Course capacity: maximum of 10-12 students (3 groups)
- 10 ECTS

Themes and curriculum

- Design and how design professionals work introductory module (with exercises)
- Research through design, theory and practice
- Presentation activities: exhibition, presentations, design critic sessions

Assignments and exam

- Weekly mandatory presentations
- Oral exam and final exhibition
- Grade: pass/fail
INF 4060
(cloned INF2260 for master students who need more advanced interaction design method course)

Interaction Design

Teaching and projects
- Usual teaching form, starting August 25 – Dec. 1
- Lectures, group teaching, group projects (3-4 students per group)
- 10 ECTS

Themes and curriculum
- In-depth methods for design (design thinking, service design, research through design, user-centered design, participatory design)
- In-depth methods for evaluation
- In-depth methods for analysis of data
- High-fidelity prototyping
- Presentation activities: midterm and final (competition) presentations, design critic sessions

Prerequisites:
To take this course, completed INF1500, INF1510, or equivalent are strongly recommended

Contact person:
Alma Leora Culén
almira@ifi.uio.no

See more info at the course page for INF2260, and review earlier projects - http://www.uio.no/studier/emner/matnat/ifi/INF2260/index.html
Courses

IS-courses: IN5210, INF5750, INF5850 (all regular courses)

IN5210 - Information Systems *(Petter Nielsen)*

http://www.uio.no/studier/emner/matnat/ifi/IN5210/h17/

INF5750 - Open Source Development *(Olav Poppe)*

http://www.uio.no/studier/emner/matnat/ifi/INF5750/h17/

INF5850 - ICT for Development: Building a Better World? *(Sundeep Sahay)*

http://www.uio.no/studier/emner/matnat/ifi/INF5850/h17/

Contact person: Petter Nielsen
pnielsen@ifi.uio.no
Overview of course schedules

INF5205
Advanced Topics in Design of Information Systems
28. August – 29. September

INF5591
Advancements in interaction design

INF5850 *
ICT for Development: Building a Better World?

INF5011
Technology Society Ethics

INF4060
Interaction Design

INF5261
Development of mobile information systems and services

INF5722
Experimental design of IT

IN5210
Information infrastructure

INF5750
Open Source Development

* INF5850: Date awaiting confirmation
Combining intensive and regular courses

- **INF5205** and **INF5591** will run through the whole week for five weeks each.
- **INF5205** can be taken in combination with **INF5261/INF5722** upon agreement.
- Both courses require passed **INF2260/INF4060**, so they do not conflict with **INF4060**.

- **INF5261** and **INF5722** will run the whole semester (hopefully) on Thursdays and Fridays.
- **INF5011** will run the whole day Monday through Wednesday for five weeks each and can therefore be taken in combination with **INF4060** and/or **INF5722**.
- Please note that the specific days and times for **INF5261** and **INF5722** have not been set.
Course capacities

- Most courses have open capacity/no limits, i.e., all those who apply will be allowed to take the course
- Two of our intensive courses (INF5205 and INF5591) have a maximum capacity due to limited lab space...
- ...and if more students apply than we can accommodate, all students applying will be ranked. Note that this is mainly a security measure; all students who have previously applied for these courses have been accepted and there should be room for all students interested.

Intensive courses

- INF5011/INF9011 – Open capacity/no limits
- INF5205/INF9205 – Maximum capacity of 10-12 students
- INF5261/INF9261 – Open capacity/no limits
- INF5591/INF9591 – Maximum capacity of 10-12 students
- INF5850/INF9850 – Open capacity/no limits

Regular courses

- INF4060 – (Normally open capacity, but may be restricted)
- IN5210 – Open capacity/no limits
- INF5722/INF9722 – Open capacity/no limits
- INF5750 – Open capacity/no limits
Summary

- Join the buddy program Facebook-group: https://www.facebook.com/groups/1072004702847732/

- Contact us for any questions before we meet you in August:
  - For questions about admission, formal requirements, or sick leave/part-time studies: studieinfo@ifi.uio.no
  - For questions about theses, courses or all non-administrative questions: joshi@ifi.uio.no
  - Remember that you can also contact the person listed under each research topic

- Don’t worry if this was a bit confusing – we will repeat most of it during the introduction meeting

- See you in August!
Alle varianter av løp 4 er ment for studenter som kun trenger 20 studiepoeng høsten 2017. Det er ikke mulig å velge to intensivkurs + ett langkurs. Eneste måten å ta to intensivkurs på er å droppe alle langkurs (løp 1 eller løp 4).

INF5591 kan ikke tas sammen med langkurs pga. overlappende undervisningsaktivitet. INF5591 er primært for 5. årsstudenter som tidligere har tatt INF2260/INF4060 og INF5205, men kan slippe til 4. årstudenter som oppfyller følgende krav:
- Studenter som kun ønsker/trenger 20 studiepoeng høsten 2017 kan velge løp 4a eller 4c.
- Studenter som får plass på INF5205 kan velge løp 1 (INF5205 + INF5591 + INF5011) for 30 studiepoeng dersom det er ledig plass på INF5591.

Intensivperiode 2: uke 40-45 (2. oktober - 3. november)
Hi there!

To make your beginning at this master study the best it can be, the existing master students have arranged some social events for you. This is so you can get to know each other.

We will start with a brunsj (designfrønsj) where everyone can meet and find buddies for the coming introduction days. Also make sure to keep Friday open for the BBQ, and also for the rest of the social events. Look at the next page for the schedule of the week.

Meet at 7th floor at IFI 10am on the first day of the master week, Wednesday 16. August.

Best regards,
Lone, Oda & Pernille

Ps: you can join our facebook-group. This is a low threshold place to ask questions and get to know your fellow design students.

https://www.facebook.com/groups/1072004702847732/
THE WEEK (16/8 - 18/8)

**WEDNESDAY**
10.00 - 11.30
Design transj
11.45 - 18.00
Master intro
18.00 →
Social

**THURSDAY**
10.00 - 16.00
Master intro
16.00 →
Social

**FRIDAY**
10.15 - 15.45
Master intro
16.06 - 19.00
Design BBQ
19.06 →
CTRL + ALT + DEL PARTY
Cabin trip (11 - 12 October)

We are planning on having a cabin trip in the middle of October. This is for all the design students at the master program, including the PhD students and the lecturers.

This trip will have some master related content as well as being a social happening. This is so we can get to know each other even better. Last years trip was a lot of fun!

Save the date: Wednesday - Thursday, 11-12 October.