SLAM Summer School

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Kungl Tekniska Högskolan

Outline

- Welcome
- Introduction
- Local arrangement issues
- Participant presentation
Welcome

- 1st Summer School on SLAM
- 50 International students
  - Significant US, Australian and Swiss presence
- A prestigious set of instructors
  - “They” are all here!
- Integrated “lectures” and “exercises”
- Hope you will have a lot of fun and learn a little 😊
- Take advantage of the social dimension

Introduction

- Course outline
  - Lectures
    - Intro methods
    - SLAM basic and techniques
    - Data Association
    - Representation ...
    - Case studies: in-door, out-door, underwater, aerial
  - Exercises (in computer hall next door)
### Week schedule

<table>
<thead>
<tr>
<th></th>
<th>Monday</th>
<th>Tuesday</th>
<th>Wednesday</th>
<th>Thursday</th>
<th>Friday</th>
</tr>
</thead>
<tbody>
<tr>
<td>Morning I</td>
<td>Intro KF intro (HDW)</td>
<td>EKF SLAM (EN)</td>
<td>Data assoc (JDT)</td>
<td>Representation (RE)</td>
<td>Case II (EN,HIC,WB)</td>
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<tr>
<td>Morning II</td>
<td>History (HDW)</td>
<td>Bayes SLAM (ST)</td>
<td>Eff. SLAM (ST &amp; WB)</td>
<td>Computation (JL)</td>
<td>Cases III (JL &amp; EN)</td>
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<tr>
<td>Afternoon</td>
<td>Lab session-Basics</td>
<td>Lab Session-SLAM basis</td>
<td>Lab Session-Data Assoc</td>
<td>Cases I (PJ &amp; DA)</td>
<td>Open issues &amp; wrap up</td>
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<tr>
<td>Evening</td>
<td>Reception @ CAS</td>
<td>Ferry ride &amp; Dinner</td>
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### Social activities

- **Tonight ~18.00-19.00**
  - Informal reception at CAS
  - Snacks and beverages
- **Wednesday evening**
  - Ferry ride to Fjäderholmen (15-20 min)
  - Dinner @ Fjäderholmen
    - A buffet from the sea
- **Take advantage of the diverse cuisine in Stockholm and the night life!**
Material

- Printed volume
  - Schedule, local information
  - Slides from several presentations
- CD-Rom
  - Slides (PDF), Relevant papers (PDF), Matlab material (dataset, basic code)
- WWW site
  - All material will be made available at http://www.cas.kth.se/SLAM

Mapping

Subway station "tekniska högskolan"
Lecture hall D1
Lunch restaurant
Local mapping

Centre for Autonomous Systems

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Local Landmarks

- All lectures in D1
  - DHCP is supposed to operate in this room!
- All exercises in groups of 2 at the computer hall (game hall – spelhallen)
  - On Sun/Solaris computers (using matlab)
- Lunch: several restaurants in the area
  - Östra Station, Quantums, Jakthornet (Tennis stadium), ...
- CAS: Through the “forest” to Fiskartorpsvägen 15

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Before we start!

- Brief introduction for each person
  - 30s -1 minute / person
  - Name, Affiliation, Project

  Henrik I Christensen, KTH, Dir of CAS, Prof of CS, Research on service robotics, systems integration, SLAM in large envs, cognitive vision, Sensor scheduling

Now I will shut up!

- Enjoy the week.

- Please let us know if you have questions, problems, comments, ...