

ELEC5780

—
Postgraduate course
on measurement
science and
technology

Lecturer Juha Peltoniemi



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Teacher

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**Expert in underground
measurements and
management**

A? Aalto University
School of Electrical
Engineering



Codes

- **ELEC E5780**
 - Postgraduate course on measurement science and technology
 - 10 credit units
- **ELEC E5781**
 - Alternative code for the same course
 - Sometimes there have been or may be different courses with the same code
- **ELEC E5740**
 - Research seminar on measurement science and technology
 - 2 points
 - Only follow the lectures, all of them
 - No own lecture
- **ELEC E5741**
 - Alternative code



Passing the course

- **Attend all the lectures**
 - Really all
- **Exceptions in case of illness etc**
 - Must compensate with a separate assignment
- **E5780**
 - Give your own lecture
 - Two hours (2 x 45 min = 1 h 30 min)
 - May be related to your research work
 - Not a report of your results

Topics for the lecture

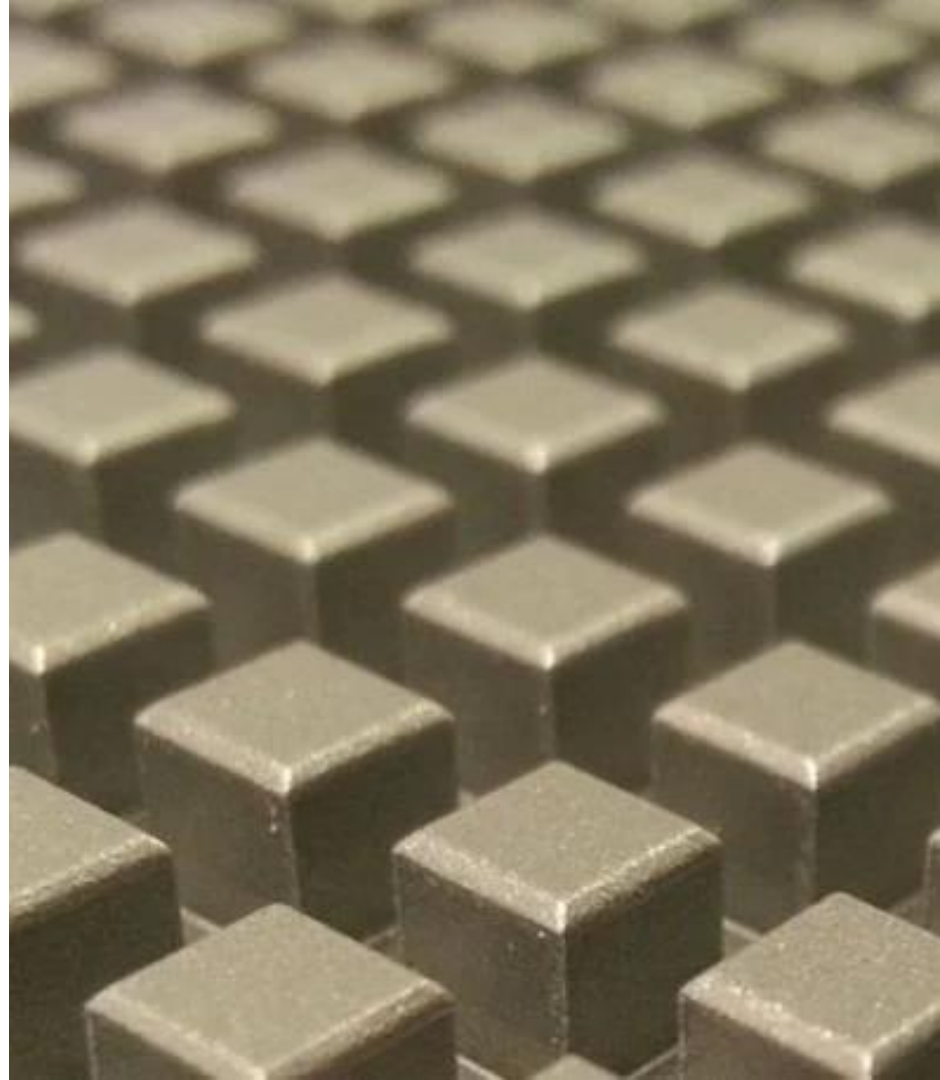
Up to you to decide

Almost anything scientifically related to measurements

Physical, chemical, technical, commercial, astronomical measurements

Even theory of measurement

You do not need results yet



About the lecture

Describe

- what you measure
- why you measure
- how you measure
- how you analyze the data

Pay attention to quality

- Uncertainties
- Errors
- challenges



Contents of your lecture

- **Calibrate the level to the assumed knowledge of your fellow students**
 - Postgraduate course
 - Various backgrounds
- **Do not overestimate**
 - People forget fast
 - People enjoy hearing what they already know
- **So do not forget the basics**
 - Repetitio est mater studiorum
- **Consider what your fellows need to learn**
- **Be prepared for questions and discussions**
- **Promote interactivity**



Times of the lectures

Reserve your time slot as early as possible until May

- **Communicate at next lectures or email to Juha**

Flexible schedule

- **We do not meet every week**

Lecture hall reserved for us Thursdays 8-12

- **Agreed to start 9 o'clock**

Other locations possible

- **Could be even your work place if you want to present your laboratory and hands-on work**
- **A plain laboratory tour is not sufficient for the lecture**

Bad times

Any times to avoid due to your known absence?

No lectures

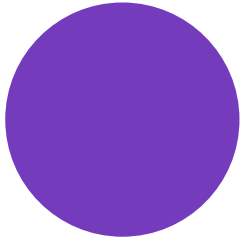
- 23 February
- 2 March

Also 16 February booked for others after 10 o'clock

- Before that possible



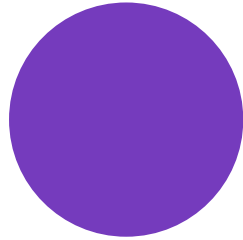
Initial programme



26 January

**Introductory
lecture**

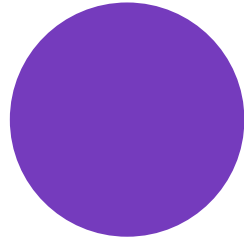
Juha Peltoniemi



2 February

**Uncertainties in
measurements of
...**

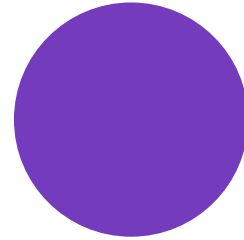
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9 February

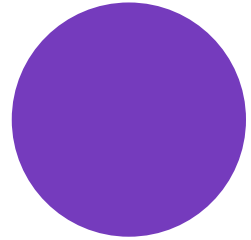
**Combining
measurement
science and
quality to achieve
global success in
industry?**

***Martti Heinonen,*
VTT MIKES**



9 March

Masoud Rastgou



Relax

No one has yet died on this course

Your lecture does not have to be perfect – good is sufficient

You do not have to be perfect

You are learning here

You can make mistakes

Just learn about them

You can ask the lecturer for any help and assistance you need



See you in the next lecture



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