EE-611  
Linear system theory

Müllhaupt Philippe

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<thead>
<tr>
<th>Cursus</th>
<th>Sem.</th>
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<td>Génie électrique</td>
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Frequency
Every 2 years

Remarque
Every 2 years. Next time: Fall 2017.

Summary
The course covers control theory and design for linear time-invariant systems: 
(i) Mathematical descriptions of systems 
(ii) Multivariables realizations; 
(iii) Stability; 
(iv) Controllability and Observability; 
(v) Minimal realizations and coprime fractions; 
(vi) Pole placement and model matching.

Content
The course contents include the following main chapters:
- Mathematical description of linear systems
- State-space solutions and realizations
- Stability
- Controllability and observability
- Minimal realizations and coprime fractions
- State feedback and state estimation

Keywords
Linear dynamic models, Linear systems, Stability, State feedback, State estimation.

Learning Prerequisites

Recommended courses
- Linear Algebra
- Differential Equations
- Automatic Control

Assessment methods
Written exam and oral presentation.