EPFL

MATH-638	**Integral equations methods for exterior problems**
	Buffa Annalisa

Cursus	Sem.	Type
Mathematics		Opt.

Language of teaching	English
Credits	2
Session	
Exam	Oral presentation
Workload	60h
Hours	**30**
Courses	16
TP	14
Number of positions	

Frequency

Only this year

Remark

Postponed until further notice

Summary

I will introduce integral equation formulations for the Laplace, the wave equations and the electromagnetic scattering problem. The wellposedness and the discretization of these problems are discussed.

Content

- representation formulae for exterior problems for Laplace and wave equations
- integral equations formulation and wellposedness
- discretization via Galerkin techniques
- the issue of integration
- Calderon identity and Calderon preconditioners
- Extension to electromagnetic wave propagation.
- Compression algorithms

Some of the courses will be organized as reading courses.

Note

Invited lecturer: Stefan SAUTER