FSF3732 Dynamics of Strings and Membranes 7.5 credits

Dynamik av strängar och membran

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for FSF3732 valid from Spring 2010

Grading scale

Education cycle

Third cycle

Specific prerequisites

A Master degree including at least 30 university credits (hp) in in Mathematics.

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

After passing the course the students will understand, and are able to apply, the theory of relativistic extended objects.

Course contents

The course covers:

- Geodesics
- Relativistic M-branes
- Volume functional and level set approach Light-cone description in orthonormal gauge Matrix regularization (M=2) Multilinear formulation
- Graph description
- Hydrodynamic descriptions
- Reconstruction algebras
- Critical Dimension
- Dynamical Symmetry
- Topology Change

Disposition

Lectures

Course literature

J.Hoppe, “Relativistic Membranes”, Journal of Physics A: Math.Theor.46, 2013

Examination

Based on recommendation from KTH’s coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Weekly homework and an oral examination.

Other requirements for final grade

Approved homework and oral examination.

Ethical approach

- All members of a group are responsible for the group's work.

- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.