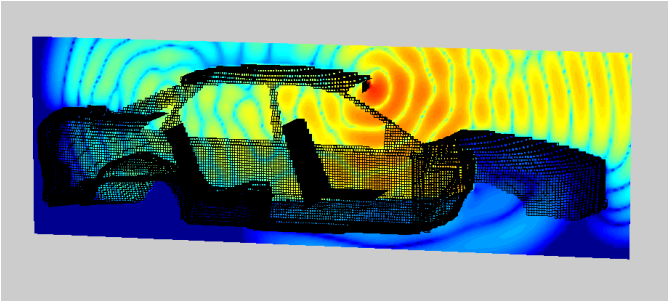
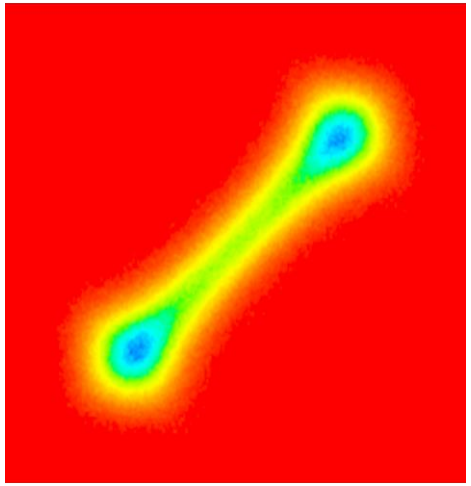
Computational physics

Physics done by means of computational methods

Influences virtually all fields of physics





Aim

To refine computational skills by providing direct experience in using a computer to solve computational problems in physics.

Physics

Numerical Methods

Programming

For more details, see: http://fy.chalmers.se/~tfsgw/CompPhys

	Lectures	Exercises/Home work problems	
Ordinary differential equations	Linear dynamics	E1	
	Non-linear dynamics	E2	
	Molecular dynamics		H1a/H1b
Stochastic methods	Monte Carlo integration	E3	
	Metropolis algorithm		H2a/H2b
	Brownian dynamics	E4	
Partial differential equations	Quantum structure	E5	H3a
	Quantum dynamics		H3b

	Lectures	Exercises/Home work problems
Ordinary differential equations	Linear dynamics	E1: c
	Non-linear dynamics	E2: c
	Molecular dynamics	H1a/H1b: c

The programming language C will be used in the course.

Please make use of the scheduled Computerlabs the first week to get an introduction to C!
Do the C-intro exercises!