

# Nuclear structure theory 2023

(Kärnstrukturteori FMFN15, FYST11)

Lecturers: A. Idini (AI), G. Carlsson (GC)

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Lectures	
w1.1 GC	Overview of nuclei
w1.2 GC	The interaction between nucleons
w2.1 AI	The mean field
w2.2 AI	Spherical potential and angular momentum
	Hand-in 1
w3.1 AI	Nuclear shell model
w3.2 AI	Collective Models I
w3.3 AI	Collective Models II
w4.1 GC	Pairing I
w4.2 GC	Pairing II
	Hand-in 2
w5.1 GC	Deformed nuclei
w5.2 GC	Symmetry restoration
w6.1 AI	Reactions
w6.2 .	Summary
w7	Hand-in 3

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## Excercises: J. Boström

Excercises sessions will be once a week.

## Literature

The literature will be handed out as a compendium. If you did not receive it, you can come at the division of mathematical physics.

## Hand-ins

There are three compulsory hand-ins report to be handed in by the end of week 2, 4, and 7 respectively during either the excercise session or put in the cupboard next to room C368.

## Oral exams

We will agree upon a schedule the 14-15th December 2023 in room B307, or 18-20th December 2023 in room C368, or with a possibility of agreeing for January 12-16th 2024.

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