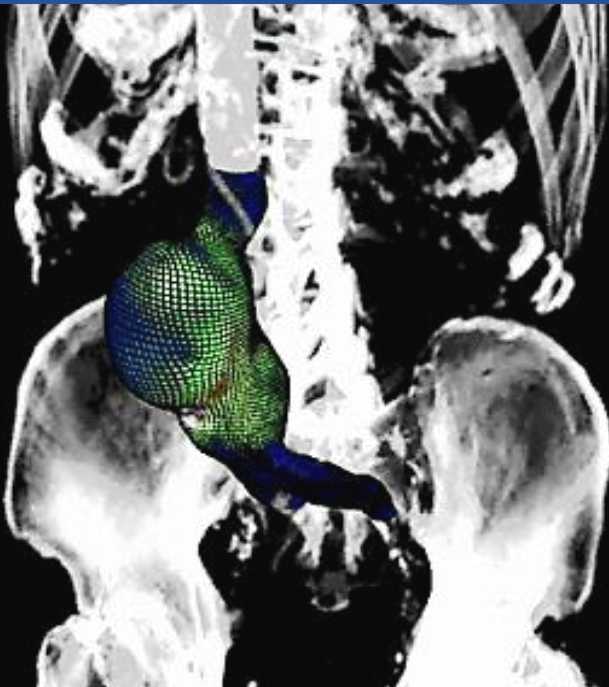




Summer School on Computational Tissue Biomechanics

August 18th to 23rd 2024
Stockholm



Faculty

Aisling Ni Annaidh, University
College Dublin, Ireland

David Marlevi, Karolinska Institute,
Sweden

Gerard A. Ateshian, Columbia
University, US

Hanna Isaksson, Lund University,
Sweden

Marco Viceconti, University of
Bologna, Italy

Marta Alloisio, KTH Royal Institute of
Technology, Stockholm, Sweden

Svein Kleiven, KTH Royal Institute of
Technology, Stockholm, Sweden

T.Christian Gasser, KTH Royal
Institute of Technology, Stockholm,
Sweden

Vikram S. Deshpande, Cambridge
University, UK

KTH Royal Institute of Technology
Material and Structural Mechanics
Teknikringen 8d
10044 Stockholm
Sweden

Venue

Content and aim

The course introduces and applies state-of-the-art tools in the continuum mechanical analysis of biological tissues. It is designed for **master students, PhD students, and Postdoctoral researchers** having a decent background in mechanical engineering and solid mechanics.

Lectures

Cover basic concepts and processes in the description of a wide range of biological tissues.

Ask the expert sessions

Discussions, controversial matters and case study presentations.

Hands-on laboratory

In-vitro tissue testing and FEM modeling in groups of approximately 12 students.

Social program

Extensive mingle activities, such as boat tour, visit to the Nobel Prize museum and pub night.

Please read the

[summer school program](#)

or email directly to

gasser@kth.se

for more information

For more information please contact
gasser@kth.se

Sunday, Aug. 18th
 17.30-18.30 Boat tour through The Royal National City Park and registration

Monday, Aug. 19th
 8.15-10.15 Gasser: Comp. Continuum Biomechanics
 10.15-10.45 Coffee break
 10.45-12.45 Deshpande: Constitutive modeling 1
 12.45-14.00 Lunch break
 14.00-15.15 Ask the expert/case studies: Gasser/Deshpande
 15.30-18.00 In-vitro tissue testing (group 1)
 15.30-18.00 FEM modelling (group 2)
 16.00-17.00 Guided tour around KTH campus (group 3,4,5)

Tuesday, Aug. 20th
 8.15-10.15 Ateshian: Constitutive modeling 2
 10.15-10.45 Coffee break
 10.45-12.45 Marlevi: Non-invasive clinical imaging modalities
 12.45-14.00 Lunch break
 14.00-15.15 Ask the expert/case studies: Ateshian /Marlevi
 15.30-18.00 In-vitro tissue testing (group 2)
 15.30-18.00 FEM modelling (group 3)
 16.00-17.00 Guided tour in Nobel Prize Museum (group 1,4,5)

Wednesday, Aug. 21st
 8.15-10.15 Viceconti: Bone
 10.15-10.45 Coffee break
 10.45-12.45 Isaksson: Tendon, Ligament, Cartilage
 12.45-14.00 Lunch break
 14.00-15.15 Ask the expert/case studies: Viceconti /Isaksson
 15.30-18.00 In-vitro tissue testing (group 3)
 15.30-18.00 FEM modelling (group 4)
 16.00-17.00 Guided tour around KTH campus (group 1,2,5)

Thursday, Aug. 22nd
 8.15-10.15 Gasser: Vascular tissue
 10.15-10.45 Coffee break
 10.45-12.45 Annaidh: Skin
 12.45-14.00 Lunch break
 14.00-15.15 Ask the expert/case studies: Gasser/ Annaidh
 15.30-18.00 In-vitro tissue testing (group 4)
 15.30-18.00 FEM modelling (group 5)
 16.00-17.00 Guided tour in Nobel Prize Museum (group 1,2,3)
 19.30-22.15 Dinner

Friday, Aug. 23rd
 8.15-10.15 Kleiven: Brain/head
 10.15-10.45 Coffee break
 10.45-11.15 Ask the expert/case studies: Kleiven
 11.15-13.30 Lunch break
 13.30-15.00 Multiple choice test in groups of four students
 15.30-18.00 In-vitro tissue testing (group 5)
 15.30-18.00 FEM modelling (group 1)
 20.00- Pub night



The school takes place at **KTH main campus** in the north of Stockholm city.

Lectures will be given in Gradångsalen, right in the center of KTH main campus.

Laboratory work is carried out at Material and Structural Mechanics, a division of the Department of Engineering Mechanics.

Social program includes a guided tour around KTH campus, boat tour through The Royal National City Park, a guided tour in the Nobel Prize Museum, and a pub night concludes the school.



Registration Fee^c

	Early bird ^a	Regular
Lectures ^b	250 Euro	290 Euro
Hands-on laboratory	160 Euro	180 Euro
Dinner	90 Euro	

a) Registration received before May 1st, 2024
 b) Same rates apply for joining the zoom live stream
 c) The registration fee (including tax) is to be paid up front through at [Axaco Air](#), and 85% refund will be granted when the written cancellation request is sent to gasser@kth.se and received not later than July 18th 2024, thereafter no refund will be granted.