1st International Symposium on Multi-Scale Experimental Mechanics

DTU Civil Engineering
Department of Civil Engineering

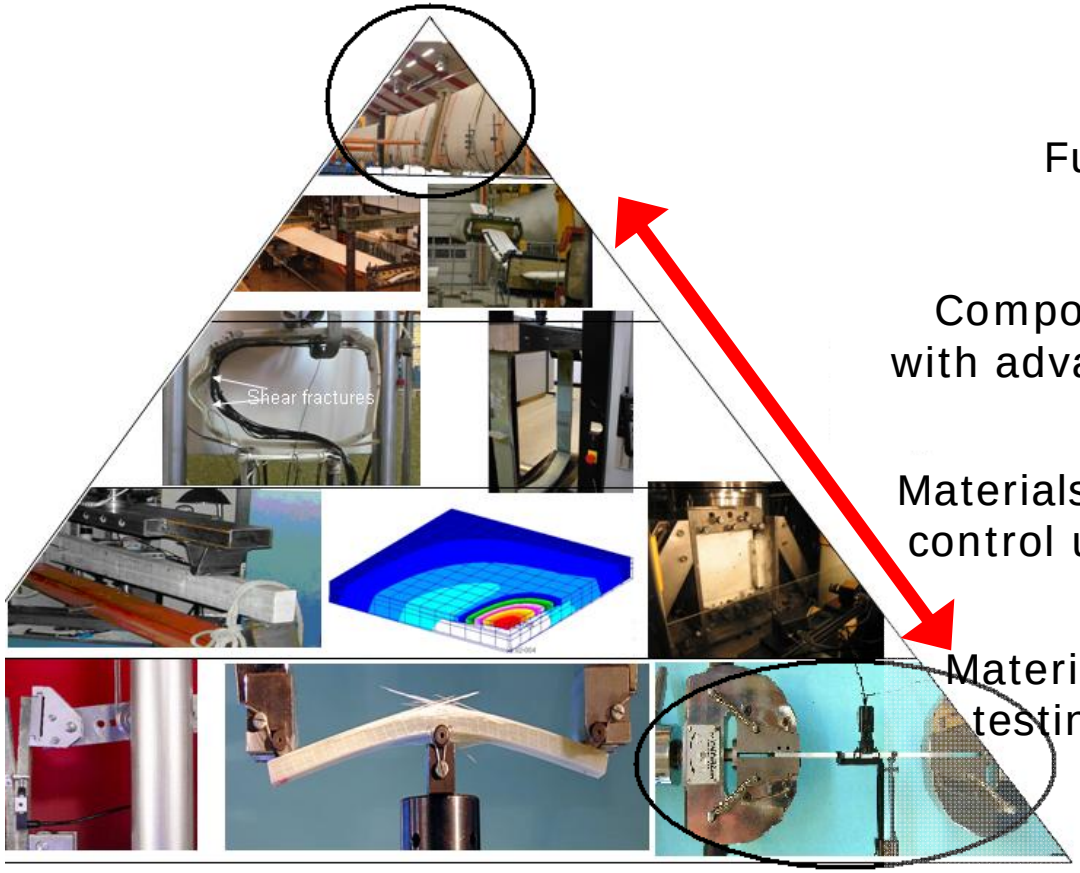
DTU Mechanical Engineering
Department of Mechanical Engineering

DTU Wind Energy
Department of Wind Energy

CASMaT
Villum Center for Advanced Structural and Material Testing

The research challenge – creating a holistic approach to engineering structures and materials

MULTI-SCALE RESEARCH AND ENGINEERING



Full scale: monitoring & modeling

Component or sub-structure: hybrid testing with advanced boundary conditions, control and modeling

Materials and interfaces: testing with advanced control under environmental control combined with modeling

Material structure and composition: micro-testing and –tomography combined with modeling

New and powerful modeling techniques require more advanced experimental techniques for verification and new experimental characterization helps develop the fundamental, physical understanding of the governing phenomena

CASMaT Activities

Center activities can be divided into three core areas:

- Operation, maintenance and upgrading of the experimental facilities
- Supply of services to experimentally oriented research projects
- Organization of professional activities including symposia, workshops and organization of advanced courses.

New strong floor/wall facility on Lyngby Campus

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Technical program

Morning

08:30-09:00	Coffee and rolls	
09:00-09:10	Welcome	Henrik Stang
09:10-09:50	**Invited lecture: Understanding the Materials – Manufacturing – Structural Performance Hierarchy for Composite Materials and Structures**	**Professor D.S. Cairns, Montana, State University**
09:50-10:05	Fiber Bragg Grating: A promising technology for wind turbine blade strain detection	Federico Belloni
10:05-10:20	Modal and static response of small wind turbine blade	Vladimir Fedorov
10:20-10:35	Challenges related to full scale concrete bridge testing and related monitoring	Philip Skov Halding

I hope you will enjoy the day !