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University of Applied Sciences
of Southern Switzerland

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eLab

What is

TEMAS is an online repository of learning object of techniques, tests and norms concerning building structures.

Why

- Only few universities have a laboratory for the execution of practical tests for and with the students.
- Tests are very expensive (high involvement of technicians and materials).
- Laboratory activities have reduced time.

Repository structure



Mechanics of materials	Materials	Structures	Special
Stress and strain, constitutive law, axial loads, bending, shear and torsion.	Concrete (fresh mix, mechanical tests, special tests), steel, wood, plastic, rock.	Reinforced concrete (beam, slab, frame), steel (beam, truss, frame), wood (beam, truss, frame).	Special structures and experimental case.

Modules



Each object is centred around an experimental test on the mechanical characteristics of materials and structures. It includes a commented video clip of the test, integrated with a theoretical introduction, annexes concerning norms and, finally, a self-evaluation test.

The project plans the development of about 40 learning objects (120 study hours). After the project, the repository will be open for update.

Course structure

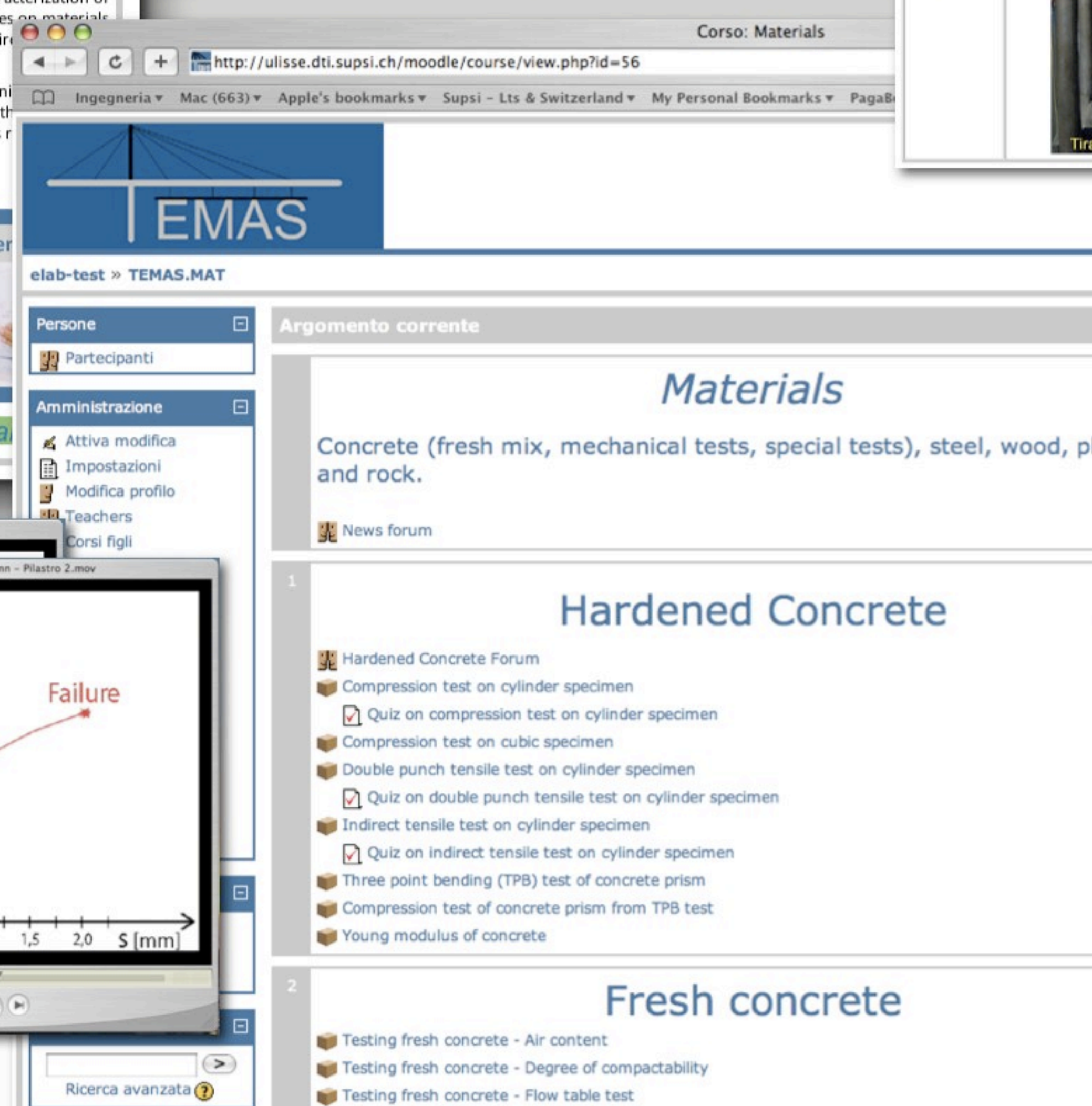
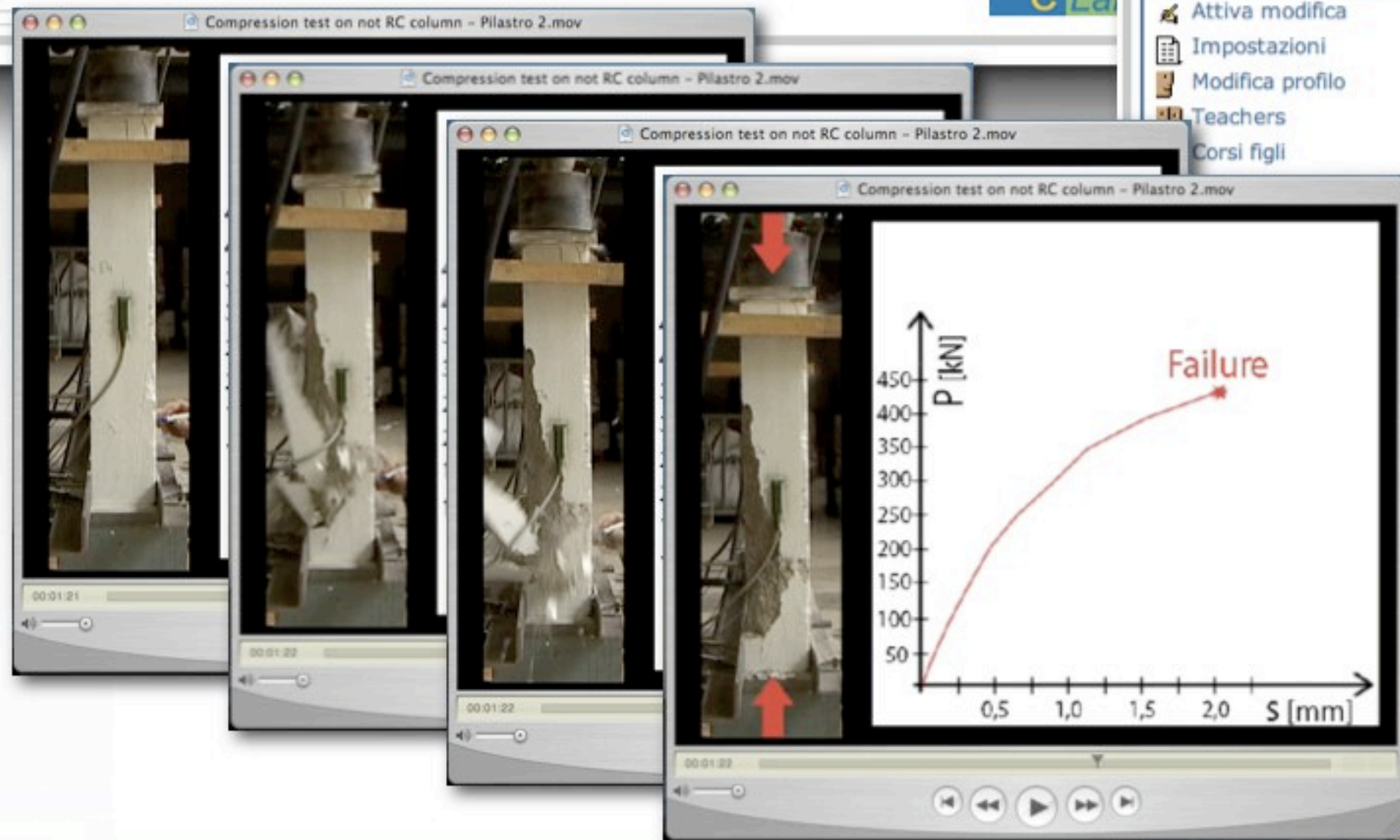
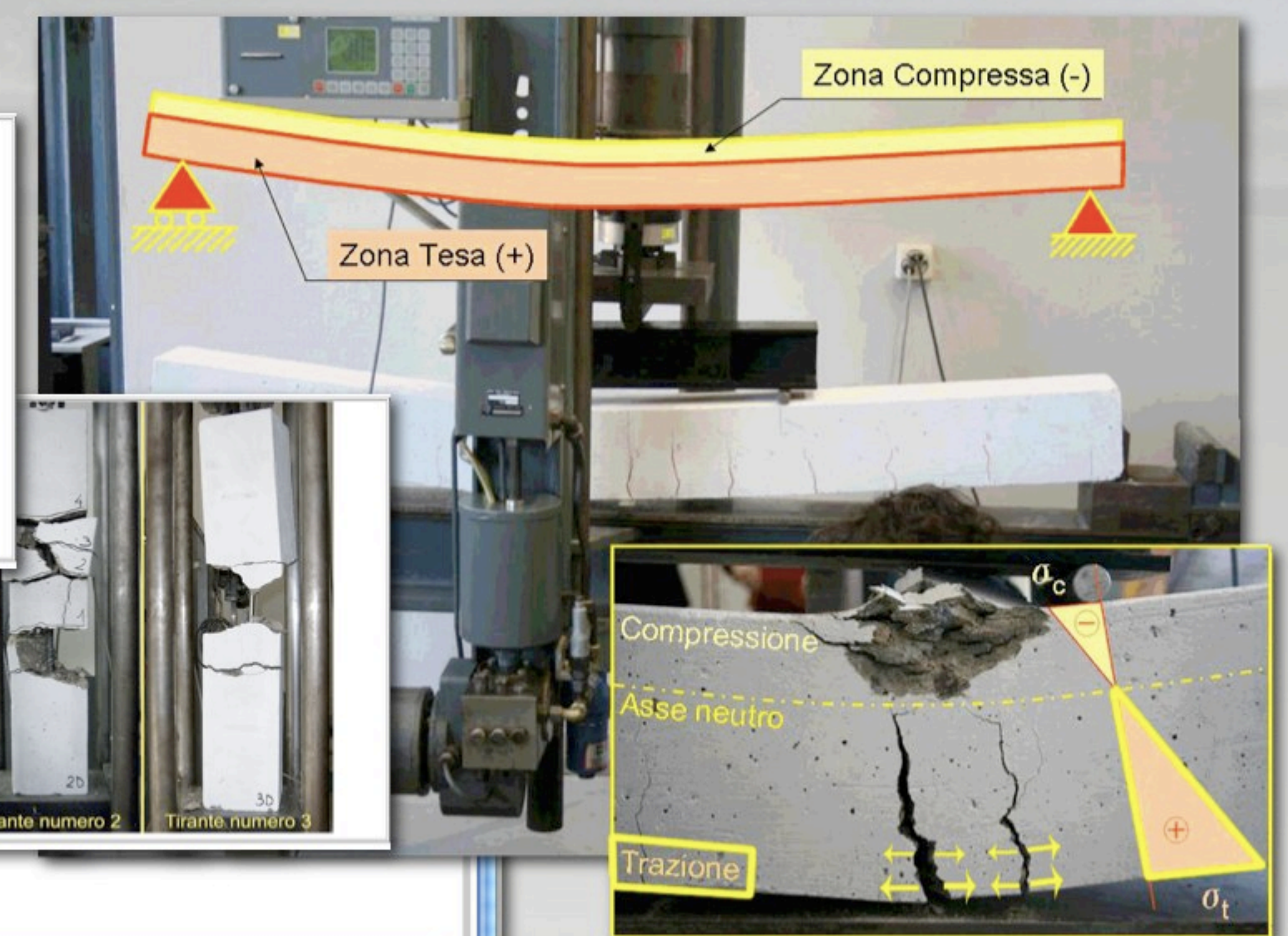
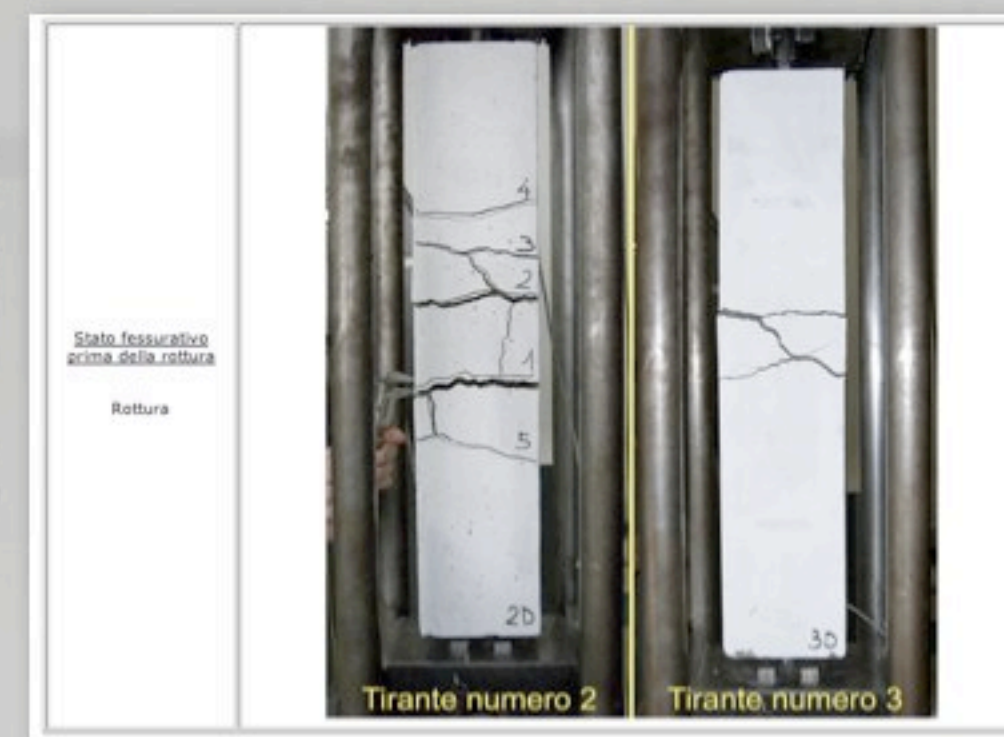
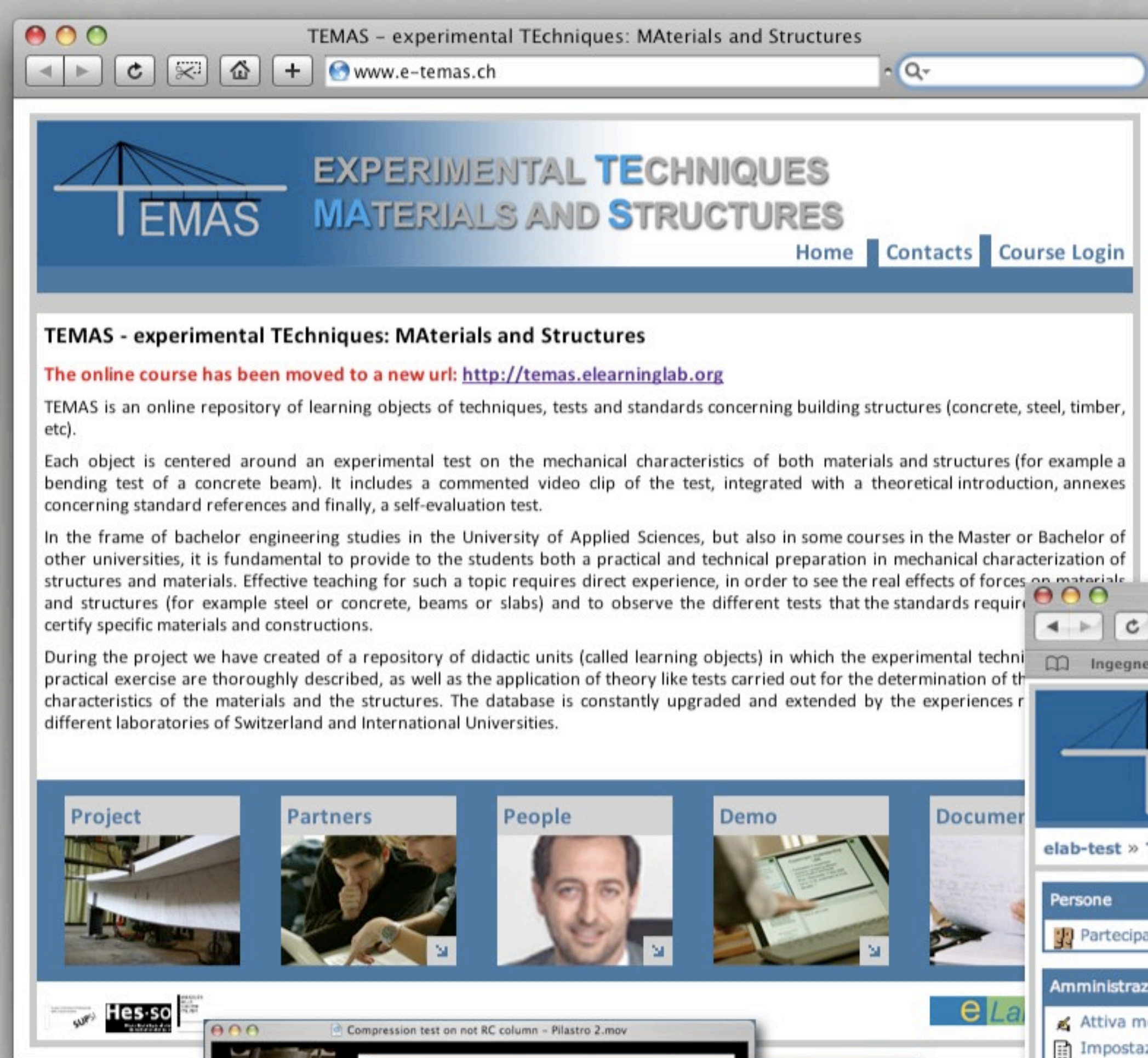
- Compression test on cubic specimen
 - Theoretical introduction
 - Test description
 - Videoclip
 - Normative references

Target



Students in Mechanics, Civil Engineering, Architecture and other related cycles in Universities of Applied Sciences (UAS), Universities and Technical Universities.

As no other similar tool is known about covering this topic, it is expected that the project can reach a wide use all over EU (5 European Universities, as external users in the development), in all kinds of higher education institutions with programs in this area.



People

Prof. Ezio Cadoni (Project leader)
Prof. René Suter (Project partner)
Prof. Andrea Bernasconi (Project partner)
Prof. Massimo Laffranchi (Project partner)

Daniele Forni (Project coordinator)
Stefano Tardini (Project coordinator)
Luca Botturi (Project coordinator)