

ALERT Doctoral School 2013

3th-5th October 2013, Aussois, France

“Soil-Structure Interaction”

Coordination: [P. Kotronis](#), [C. Tamagnini](#), [S. Grange](#)

Day 1, Thursday, October 3

THEORY

- Introduction: content and structure of the school
(P. Kotronis, C. Tamagnini, S. Grange)
- Computational plasticity for soil-structure interaction (R. I. Borja) (4h)
- Computational soil dynamics (C. Tamagnini) (2h)
- Soil Structure Interaction under earthquake loading: Theoretical framework (C. Lai) (2h)

Day 2, Friday, October 4

EXPERIMENTAL TECHNIQUES

- Centrifuge modeling of foundations subjected to cyclic loading (L. Thorel) (2h)
- Centrifuge modeling of foundations subjected to dynamic loading (S. Escoffier) (2h)
- Using strong and weak motion (ambient noise) to identify the dynamic characteristics and the response of buildings considering soil-structure interaction (P. Gueguen) (2h)

Day 3, Saturday, October 5

THEORY AND CASE STUDIES

- Application of XFEM to fault rupture dynamics (R. I. Borja) (1h)
- Advanced numerical modeling of soil-structure interaction problems: peculiarities, examples and case studies (C. Lai) (2h)
- Modeling of SSI effects on piles (C. Tamagnini) (1h)
- Simplified modeling strategies for soil-structure interaction problems: The multifiber beam concept (P. Kotronis) (1h)
- Simplified modeling strategies for soil-structure interaction problems: The macroelement concept (S. Grange) (1h)