

Faculty - Franz-Josef Ulm

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Franz-Josef Ulm

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Education

- Diplom Ingenieur (M.Sc.) 1990, TU Munich
- Docteur-Ingenieur (Ph.D.) 1994, ENPC, Paris
- Habilitation 1998, ENS de Cachan

Research Interests

Professor Ulm's research interests are in the mechanics and structures of materials. His research group is looking at the nano- and micromechanics of porous materials, such as concrete, rocks and bones; in the durability mechanics of engineering materials and structures; in computational mechanics; and in the bio-chemo-poromechanics of high-performance composite materials.

Teaching Interests

- 1.050: Engineering Mechanics I
- 1.033/1.57: Continuum Mechanics, Mechanics of Material Systems
- 1.570: Durability Mechanics, Micromechanics, Poromechanics, Chemomechanics

Selected Publications

1. Constantinides, G., and Ulm, F.-J. (2007). 'The nanogranular nature of C-S-H.' *Journal of the Mechanics and Physics of Solids*, 55 (1), 64--90.
2. DeJong, M.J. and Ulm, F.-J. (2007). 'The nanogranular behavior of C-S-H at elevated temperatures (up to 700C)', *Cem. Concr. Res.*, 37 (1), 1--12.
3. Ulm, F.-J. and Abousleiman, Y. (2006). 'The nanogranular nature of shales.' *Acta Geotechnica*, 1 (3), 77--88.
4. Tai, K., Ulm, F.-J., Ortiz, C. (2006). 'Nanogranular origins of the

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