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Seminar über Fragen der Mechanik

zu folgendem Vortrag wird herzlich eingeladen

Mittwoch, **11.12.2013, 14:15 Uhr**, Egerlandstr. 5, Raum 0.044

Theoretical and Computational Aspects on Surface Electrostatics

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The objective of this work is to study the electrostatic response of materials accounting for boundary surfaces with their own (electrostatic) constitutive behavior. The electric response of materials with (electrostatic) energetic boundary surfaces (surfaces that possess material properties and constitutive structures different from those of the bulk) is formulated in a consistent manner using a variational framework. The forces and moments that appear due to bulk and surface electric fields are also expressed in a consistent manner. The theory is accompanied by numerical examples on porous materials using the finite element method, where the influence of the surface electric permittivity on the electric displacement, the polarization stress and the Maxwell stress is examined.

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