



**Technische
Universität
Braunschweig**

Graduiertenkolleg 2075
Modelle für die Beschreibung
der Zustandsänderung bei
Alterung von Baustoffen



Vortrag im Gästeprogramm des GRK 2075

MUSEN Kolloquium im Sommersemester 2017

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University of California, Berkeley - USA

Multiscale modeling in continuum mechanics: A connection to the Irving-Kirkwood procedure

Donnerstag, 06.07.2017, 16.45 bis 18.00 Uhr
Okerhochhaus, Seminarraum EG
Pockelsstraße 3, 38106 Braunschweig

This talk describes a method for extending the classical Irving-Kirkwood procedure used in statistical mechanics to extract local fluxes to the problem of continuum-mechanical multiscale modeling. Expressions for stress and heat flux derived here are contrasted to those obtained using the standard Hill-Mandel approach. The polar nature of the macroscopic solid and the role of multiscale invariance are also addressed in the context of this method. Several applications are explored within the finite element-based homogenization of solids.

Kontakt

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