



OTTO VON GUERICKE
UNIVERSITÄT
MAGDEBURG

FAKULTÄT FÜR
NATURWISSENSCHAFTEN

Seminar über Nichtlinearität und Unordnung in komplexen Systemen

Am Montag, dem **18. November 2019**, um 16:15 Uhr im **Gebäude 22A, Raum 129**, findet der
Gastvortrag von

Herrn Suat Canberk Ozan, PhD

Norwegian University of Science and Technology

Department of Chemical Engineering

statt.

“Film drainage approach in coalescence modeling”

Abstract:

The efficient operation of multiphase engineering units is strongly affected by the characteristics of the dispersed within them, e.g., the size and the spatial distribution of the fluid particles. These characteristics are commonly investigated in the population balance framework, where the coalescence and the breakage of the particles appear as source/sink terms. Then, the single event of coalescence/breakage should be understood thoroughly, before analyzing the equipment of interest in a larger scale, where numerous fluid particles interact simultaneously.

This talk will focus on, first, the derivation of the film drainage type of models representing the coalescence of two fluid particles, where the lubrication theory and the boundary integral methods are employed. The models will be built both for clean systems, and for the ones where ‘impurity’ level of surfactants is present. In the latter case, the surfactants are assumed to give the interface viscous properties in addition to the Marangoni stresses they create. Finally, the last part of the talk will focus mainly on the transition of the results from the film drainage models to the population balance framework.

Alle Interessierten sind herzlich eingeladen!

Magdeburg, den 11. November 2019

Prof. Dr. Claus-Dieter Ohl,
Dr. Patricia Pfeiffer