

Wintersemester / Winter Term 2014/2015

## BayCEER Kolloquium

Vortragsreihe Ökologie und Umweltforschung  
*Lecture series in Ecology and Environmental Research***Donnerstag 05.03.2015, 14:00 Uhr, H6**

### Prof. Andrea Carminati

Division of Soil Hydrology, Georg-August University of  
Göttingen, Germany

## The physics of the rhizosphere and its implications for soil and plant sciences

The increasing demand of food production and the consequent pressure on soil and water resources are the motivation to identify mechanisms improving the ability of plants to take up water and nutrients from soils, in particular when these resources are scarce. Plants can adapt to water shortage by growing deeper roots that are capable to extract water stored in the subsoil. An alternative adaptation strategy of roots consists in the modification of the soil in their vicinity, the rhizosphere.

Plant roots exude up to 10% of the carbon assimilated through photosynthesis into the soil, a process referred to as rhizodeposition. The carbon exuded into the soil helps roots to take up nutrients and promotes positive feedbacks between plants and microorganisms. I will discuss how the mucilaginous fraction of the rhizodeposits, referred to as mucilage, alters the soil physical properties playing a crucial role on soil-plant water relations.

Do. / Thu. 14 st  
Gebäude/Building  
GEO  
Hörsaal/Lecture hall  
H6Die Vortragsreihe  
ist eine  
interdisziplinäre  
Plattform zur  
Information und  
Diskussion für  
Studierende,  
Forschende und  
LehrendeGäste  
sind herzlich  
willkommen*The lecture series  
serves as an  
inter-disciplinary  
platform for  
students, junior  
and senior  
scientists.**Guests  
are cordially  
invited!*