

**Wiener Biometrische Sektion  
der Internationalen Biometrischen Gesellschaft  
Region Österreich – Schweiz**

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Einladung zum

**BIOMETRISCHEN KOLLOQUIUM**

**am Donnerstag, 19. Mai 2016 um 11:00 Uhr**

in der Informatik-Bibliothek (Ebene 3, Raum 88.03.806) des  
Zentrums für Medizinische Statistik, Informatik und Intelligente Systeme (CeMSIIS)  
der Medizinischen Universität Wien, Spitalgasse 23, 1090 Wien  
(Plan siehe <http://www.muw.ac.at/cemsiis/allgemeines/anschrift/>)

Vortragender:

**DANIEL COMMENGES**

University of Bordeaux 2, Bordeaux Population Health Research Center  
INSERM Biostatistics and Sism Teams

**THE STOCHASTIC SYSTEM APPROACH TO CAUSALITY**

Wir freuen uns auf zahlreichen Besuch.

Franz König  
Präsident

Stephan Lehr  
Sekretär

## **Abstract**

### **The stochastic system approach to causality**

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I will expose the principle of the stochastic system approach to causality. The first principle is to build a system that represents the phenomena of interest. I distinguish between attributes which are part of the identity of the system (like gender, alleles) and state; the attributes are represented by random variables, while the state is represented by stochastic processes. If the system is rich enough the relationship between the processes are causal influences. Then we have observations of this system. If we can assume a well specified model, as is classical, we can estimate the true law of this system, subject to identifiability. The role of death will be discussed because it is important in ageing studies. An example on the effect of blood pressure on death and cognitive ability will be given.