

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

<http://www.meduniwien.ac.at/wbs/>

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Einladung zum

**Biometrischen Kolloquium**

am Freitag, dem 7. Oktober 2011 um 10:00 Uhr (s.t.)

im Seminarraum (88.03.513) des Zentrums for Medizinische Statistik,  
Informatik und Intelligente Systeme (CeMSIIS),  
Medizinische Universität Wien, Spitalgasse 23, 1090 Wien

Vortragender:

**Dr. Markus Bauer**

Illumina  
Cambridge

**Computational challenges in  
next-generation DNA sequencing**

Wir freuen uns auf zahlreichen Besuch.

Georg Heinze  
Präsident

Gerhard Svolba  
Sekretär

# **Computational challenges in next-generation DNA sequencing**

Dr. Markus Bauer, Illumina, Cambridge, UK

We will give a short overview of the rapid progress in DNA sequencing over the last 3 or 4 years. Within a week, a single sequencing machine in a small lab can now generate more sequence data than the Human Genome Project produced in 13 years. The sheer volume and particular properties of next-generation sequence data have created a whole new set of theoretical and computational challenges for computer scientists and mathematicians, not only changing the requirements for long-standing tasks such as alignment and assembly but also yielding a need for novel algorithms to support new applications that have now become feasible. We will highlight some of these challenges and present specific problem settings.