



Universität Ulm | 89069 Ulm | Germany

Fakultät für Mathematik und  
Wirtschaftswissenschaften  
Institut für Stochastik

**Prof. Dr. Evgeny Spodarev**

Helmholtzstraße 18  
89081 Ulm, Germany

Tel: +49 731 50-23530  
Fax: +49 731 50-23649  
[evgeny.spodarev@uni-ulm.de](mailto:evgeny.spodarev@uni-ulm.de)  
<http://www.uni-ulm.de/stochastik/>

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von

## **Professor Dr. Vladimir Spokoiny**

WEIERSTRASS-INSTITUTE UND  
HUMBOLDT-UNIVERSITY BERLIN

### **Bernstein - von Mises Theorem for quasi-posterior**

The prominent Bernstein -- von Mises (BvM) Theorem claims that the posterior distribution is asymptotically normal and its mean and variance are nearly the same as for the maximum likelihood estimator. This result is usually used to justify elliptic credible sets built by Bayes simulations. This paper revisits the classical result from different viewpoints. Particular issues to address are: nonasymptotic framework with just one finite sample, possible model misspecification, and a large parameter dimension. It appears that the BvM result can be extended to any smooth parametric family provided that the dimension of the parameter space does not exceed in order  $n^{1/3}$ .

**Termin:** **Dienstag, 23. Oktober 2012, 17 Uhr, c.t.**

**Ort:** **Universität Ulm, Helmholtzstr. 18, Raum 220**

Der Vortrag findet im Rahmen des Mathematischen Kolloquiums statt.  
Interessenten sind herzlich eingeladen.

gez. E. Spodarev