

14th Colloquium Lecture, School of Mathematics Faculty of Mathematics and Physics

Eva B. Vedel-Jensen

(University of Aarhus)

Tuesday, March 3, 2015, 12:20, Lecture hall K1

Rotational Integral Geometry and its Applications in Stereology

The aim of this talk is to give a review of rotational integral geometry and its applications in stereology. In rotational integral geometry, the focus is on integrals of geometric functionals with respect to rotation invariant measures. We will study rotational integrals of intrinsic volumes as well as the opposite problem of expressing intrinsic volumes as rotational integrals. Intrinsic volumes can be expressed as integrals with respect to geometric functionals defined on lower dimensional sections. Rotational integral geometry of Minkowski tensors will also be shortly discussed. Finally, we will show how these tools can be used to develop stereological estimators of geometric functionals.

About the speaker

Eva B. Vedel-Jensen is a Professor of Mathematics at the University of Aarhus. Her research interests cover computational stochastics, stereology, stochastic geometry, spatial statistics, integral geometry, geometric probability and geometric measure theory. She created the stochastic geometry group in Aarhus which is of world recognition, characterized by its high mathematical level and at the same time its ability for serious cross-disciplinary research. She cooperates extensively with Czech mathematicians. Recently she has been awarded the title of Guest Professor of Charles University in Prague.

Colloquium Lecture

The 14th Colloquium Lecture of the School of Mathematics is organized in cooperation with *Department of Probability and Mathematical Statistics, MFF UK*.

Further information

<http://msekc.karlin.mff.cuni.cz/colloquia>