

# Palm distributions for log Gaussian Cox processes

**Rasmus Waagepetersen**  
Aalborg University, Denmark

A spatial point process is a locally finite random subset of  $\mathbb{R}^d$  where locally finite means that the random number of points falling in a bounded subset of  $\mathbb{R}^d$  is finite almost surely. In statistical applications of spatial point processes it can be useful to consider the conditional distribution of the point process given that a point from the point process has been observed at a specific location. This type of conditional distribution is called a Palm distribution after the Swedish electrical engineer and statistician Conrad Palm. In this talk we give a non-technical review of Palm distributions and discuss Palm distributions in relation to various specific point process models and applications. In particular we present a strikingly simple characterization of the Palm distribution of a log Gaussian Cox process.

This is joint work with Jean-François Coeurjolly and Jesper Møller.