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*Spatial Statistics* concerns the *quantitative analysis of spatial data*, including their dependencies and uncertainties. *Spatio-temporal statistics* extend this to the *spatio-temporal domain*. It addresses three major types of spatial data: *lattice data, geostatistical data* that represent continuous spatial variation and *spatial point data*. These data all share a specific way of spatial dependence and a common hierarchical approach applies.

These types of data and dependence modeling have their logical extension into the space-time domain, where the relations remain similar, but estimation may be different. Methodology for spatial statistics is found in *probability, stochastics* and *mathematical statistics* as well as in information science. Typical applications are mapping of the data, assessing spatial data quality, modeling of the dependency structure and drawing valid inference on the basis of a limited set of data. Applications of spatial statistics may occur in but are not limited to the following fields: agriculture, geology, soils, hydrology, the environment, ecology, mining, oceanography, forestry, air quality, remote sensing, but also in social/economic fields like spatial econometrics, epidemiology and disease mapping.

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