

Institut für Geographie und Raumforschung der Universität Graz,  
Österr. Geographische Gesellschaft, Zweigstelle Graz, und  
Fachgruppe Geographie des Naturwissenschaftlichen Vereins für Steiermark

laden ein zum

## **Geographischen Kolloquium**

**Do. 28. Mai 2015**  
**18.00 h, im HS. 11.03**

Dr<sup>in</sup>. Linda BEALE (Redlands, CA, USA)

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# **Spatial Epidemiology: Challenges and Opportunities**

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### *Zur Vortragenden*

Linda Beale works on the Analysis and Geoprocessing Team at Esri specialising in developing applied approaches to spatial analysis through real examples and applications. She holds an honorary position at Imperial College London and continues to be actively involved in academic work, both researching and publishing in spatial and environmental epidemiology. Linda joined Esri in 2011 after spending 10 years at Imperial College London where she was a Research Fellow and led the team in GI Science and Health. Her work involved the development of methodologies for spatial analysis, modelling and programming GIS applications to explore geographical variation in chronic diseases and environmental risk for epidemiological study. Linda has published numerous papers, book chapters, presented at national and international conferences and delivered numerous workshops on spatial analysis and environmental epidemiology including for the World Health Organisation, National Cancer Institute and Centers for Disease Control in the USA and Canada.

### *Zum Inhalt*

Geography clearly has a key role to play in health analysis with spatial variations in environmental hazards, population distribution, population characteristics (including susceptibility) and health outcomes. Furthermore, management and policy can benefit when geographically targeted. Effectively defining the sources of hazards can lead to prevention, mitigation and amelioration by defining hotspots of exposure, disease clusters and excesses. There is an increasing need to address public concerns about perceived environmental health risks, however, a number of limitations and challenges continue to impact epidemiological analysis. Two elements are vital prerequisites for effective assessment of the spatial interpretation of epidemiological results: an understanding of the epidemiological processes which have been examined through appropriate analysis; and effective communication of the results to the user via appropriate graphical and cartographical processing.

The presentation will focus on a range of projects that emphasize the spatial component of epidemiological analysis. Specifically, a unique set of applications and studies undertaken by the Small Area Health Statistics Unit of Imperial College London, including the development of an Environmental Health Atlas for England and Wales published last year; and ongoing work at Esri to build tools and methodologies to support health analysis.