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THE BERTHA BIG DATA CENTRE FOR ENVIRONMENT & HEALTH OPPORTUNITIES & CHALLENGES

The BERTHA Big Data Centre for Environment and Health at Aarhus University, Denmark, aims to muster the huge potential opportunities from the Big Data revolution to help us understand the complex interactions between environmental pollutants and human health. Spatial lifecourse **epidemiology** and the exposome, are seminal concepts that underpin the centre, as we aim to recreate the lifecourses of the entire Danish population. Key to this overarching aim is **Spatial Data Science**, rich (Big) datasets, developing **algorithms and intelligent data analytics**, applied to our specific health outcomes that include **cardiorespiratory** and **mental health**. Significant **computational challenges** include Big Data collection and **linkage** from diverse **data sources** that vary over space and time. Data sources include national health registries, nationwide environmental exposures at fine **spatial and temporal** resolution; **social media**; personalised **sensors**; and individual **biomarkers** from blood bank, cardiac and **physical activity** cohorts. A further challenge involves developing Big Data analytics to extract pattern or trends from this complex set of data, a truly **Big Data mining** initiative.

**GEOSPATIAL
RESEARCH SEMINAR
SERIES (GRISS)
FREE**

**25 SEPTEMBER 2020,
1-2 PM**

**LIGHT REFRESHMENTS
FROM 12:30 PM ONWARDS**

**UC RUTHERFORD
BUILDING ROOM 263
OR ONLINE**

FREE REGISTRATION:

[https://canterbury.zoom.us/
meeting/register/tJMsd-
Guqj4iG9z0fHLsCPQ8NVWeT
pZNFuwv](https://canterbury.zoom.us/meeting/register/tJMsd-Guqj4iG9z0fHLsCPQ8NVWeTpZNFuwv)

**UNDER COVID-19
LEVELS 2 - 4
ONLINE ONLY**

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