

Empirics Theory Methodology Practice

Data:

- dynamic processes
- movement – huge
- complex structures – multivariate (plans, scenarios,...) – uncertain
- imagery
- terrain

Tasks/Purposes:

- exploration & analysis
- knowledge building
- decision making
- collaboration
- presentation & communication
- education & instruction

Technology:

- mobile devices – Web
- multimedia – GoogleEarth,
- multimodal HCI GoogleMaps,...
- augmented reality – SDI
- Wiki...

Users:

- perception & cognition
- mental maps
- metaphors
- differences (professional, educational, cultural,...)

General

Data
Typologies
& Models

Patterns & knowledge
• *typology*
• *representation*

Task
Typologies
& Models

Design
principles

Inventories of
techniques

GeoVis operators

Models of GeoVis use

Experimental
studies

Design of generic toolkits
& infrastructures

• Scalability

• *Customisation*
• *Interoperability*
• *Usability*

- Geographic interfaces
- Geographic interactions
- Collaborative GeoVis
- 3D & perspective views
- Stereoscopic views
- Legend design
- GeoVis + multimedia
- Visual Analytics
- InfoVis interfaces
- GeoVis of non-geo data

User/task-centred design

• Evaluation

Data

Tasks/
Purposes

Technology:

- requirements & limitations
- opportunities

Users:

- requirements
- abilities
- preferences, habits

Specific

Legend:

abc

– much work done and/or many people working

abc

– some work done; few people working

abc

– nothing or very little done; none or very few people working

Psychology

Cartography

InfoVis, Statistics

Artificial

SciVis... Data Mining

Intelligence

DB & DW

Instructional sciences (?) HCI

Geocomputations