



**Spatial Perspectives on Analysis
for Curriculum Enhancement**

SPATIAL ANALYSIS AND SPATIAL STATISTICS

USING CATASTROPHES AS TEACHING CONTEXT

ANA CRISTINA SIMÃO
Santa Barbara, 15-20 July 2007

Advanced GIS (& SA)

● **Students come with GIS background**

Projecting maps, joining tables, buffering, clipping ...

Output production

● **Content including**

...

Exploratory Spatial Data Analysis (ESDA)

Spatial statistics

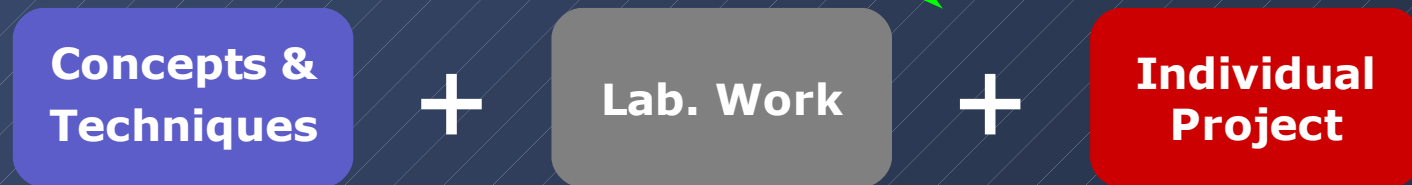
● **Ultimate goal**

students become familiar with techniques and software tools for spatial analysis, which will enable them to work and solve their own spatial problems

Course design

*'Tell me, I forget,
Show me, I remember,
Involve me, I understand'*

exposure to software



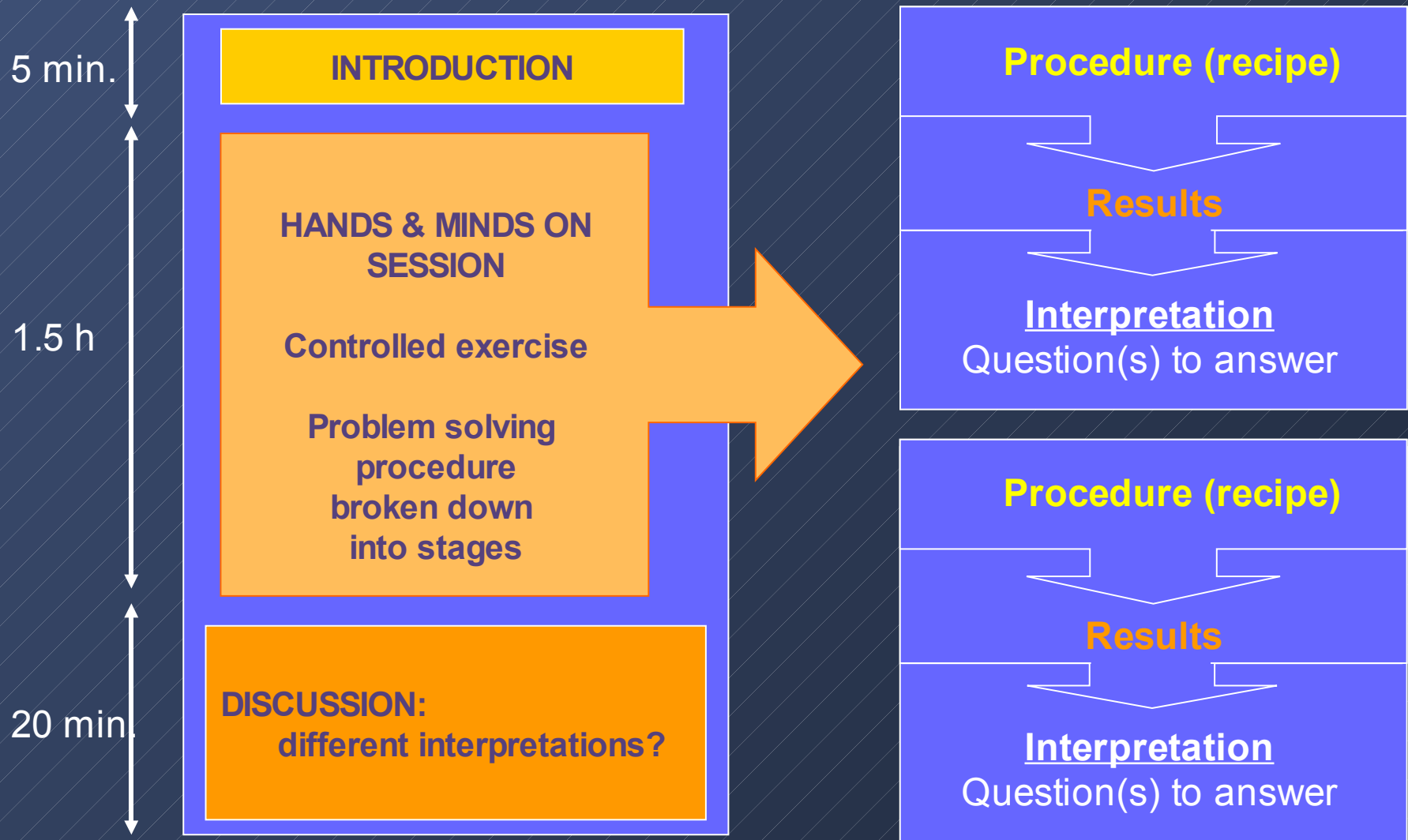
- **controlled exercises**

pieces of work yielding known results
students interpret results

- **final project**

provide an objective & data/data sources
Students choice of procedure and conducting work

Design lab. sessions [2h]



Controlled exercises

- a single dataset (pre- and post- Katrina info)
- multiple questions – opportunities to introduce different/appropriate software

GeoDa

Who returned after the hurricane?

Patterns? age, income, ethnicity, house ownership

Are returnees randomly distributed over space?

What commanded it? Infrastructures recuperation? Location of business/job?

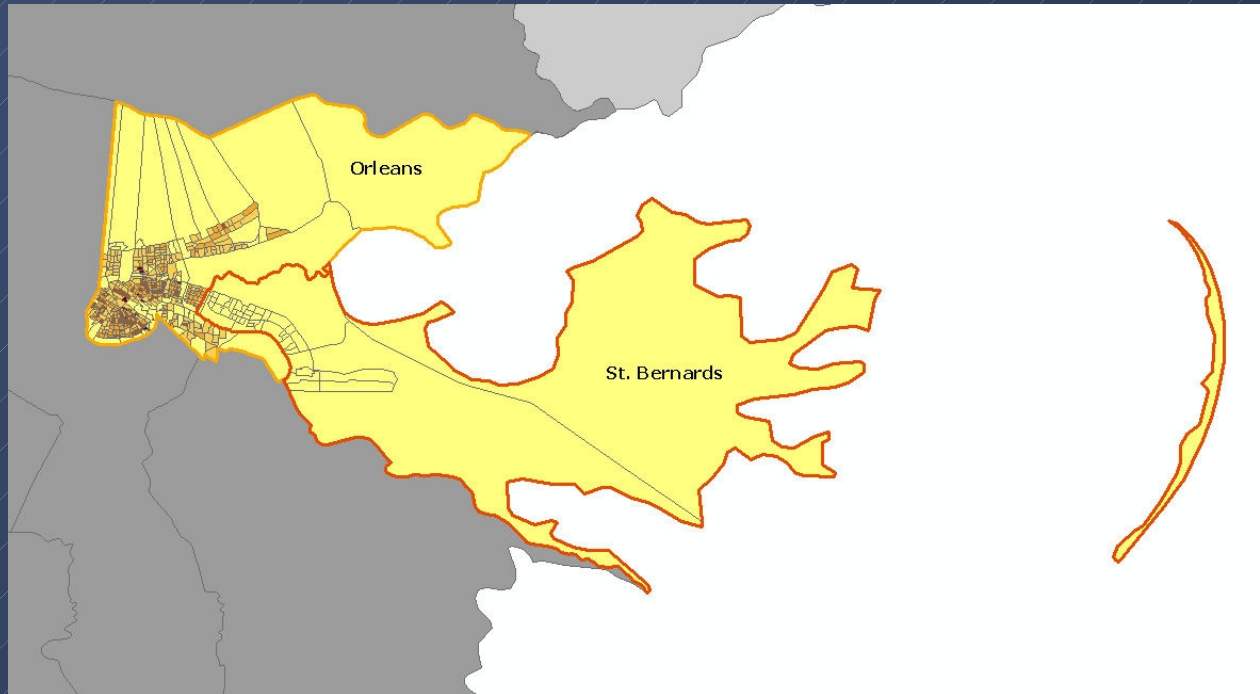
Flow Mapper

Where did migrating move to?

Have movements (e.g., commuting) within the parish changed after Katrina?

implication in planning/prioritizing reconstruction (e.g., roads)

Preparing dataset – problems!



Census

Block groups
2000

Post-Katrina info

[GNOCDC](#) – information but .PDF and different scales – neighborhoods; planning district

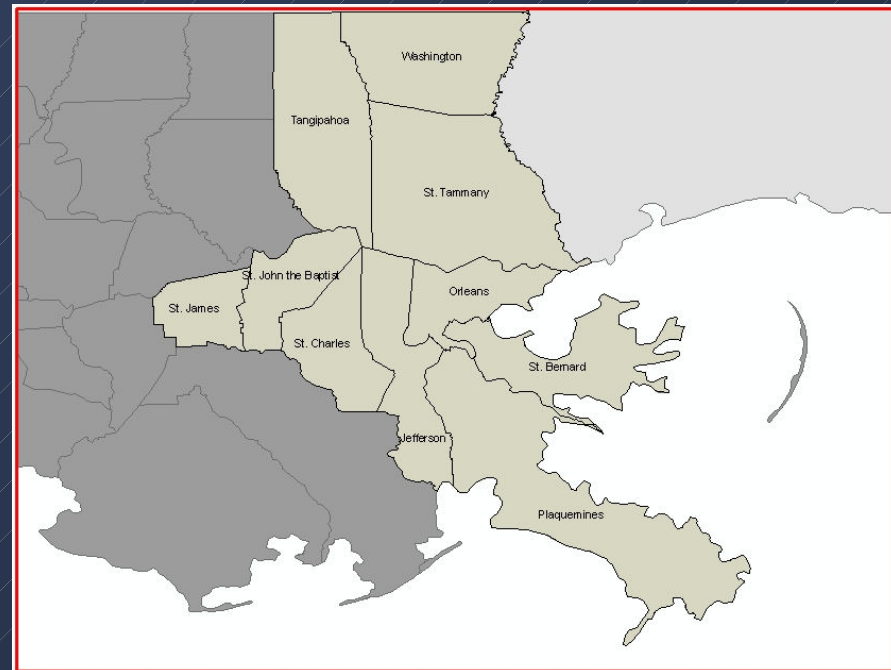
[US Census Bureau](#) - parishes

Next ... & evaluation

- 2 strategies for dataset creation
 - select different case study (for simplicity: classic demog. & social-economic variables)
 - change scale of analysis; chase" post-katrina data em .xls format

- Create multiple questions for software practicing

Preparing lab sessions require good decisions right from the beginning, time and skills



Katrina mass migration

- location after fleeing storm

from 40,000 postings on Internet "safe lists" by Katrina survivors

