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Kathmandu, Nepal 14–16 November

REGIONAL CONFERENCE 2024

Climate Responsive Land Governance and Disaster Resilience: Safeguarding Land Rights



**Presented at the FIG Regional Conference 2024,
14-16 November 2024 in Kathmandu, Nepal**

A Global Perspective on Geomatics Education for Territorial Governance

Prof. Angel Collado


Spain 

FIG YSN Academic/Educational Affairs Representative

Spanish FIG Delegate (COIGT)



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What is Geomatics?

“Discipline concerned with the collection, distribution, storage, analysis, processing, presentation of geographic data or geographic information”

ISO/TC 211 Geographic information/Geomatics



Do we all understand this definition?

Does it need to be redefined or completed?

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What is Geomatics?

Academic Context

Do we know what is the core of our studies? What does our discipline consist of?

Techniques vs. Applications.

Do we know which are techniques and which are applications?

Do we know the difference between technical studies, science and engineering?



Professional Context

What do we mean by a profession?

Has there always been one profession in our field or are there several?

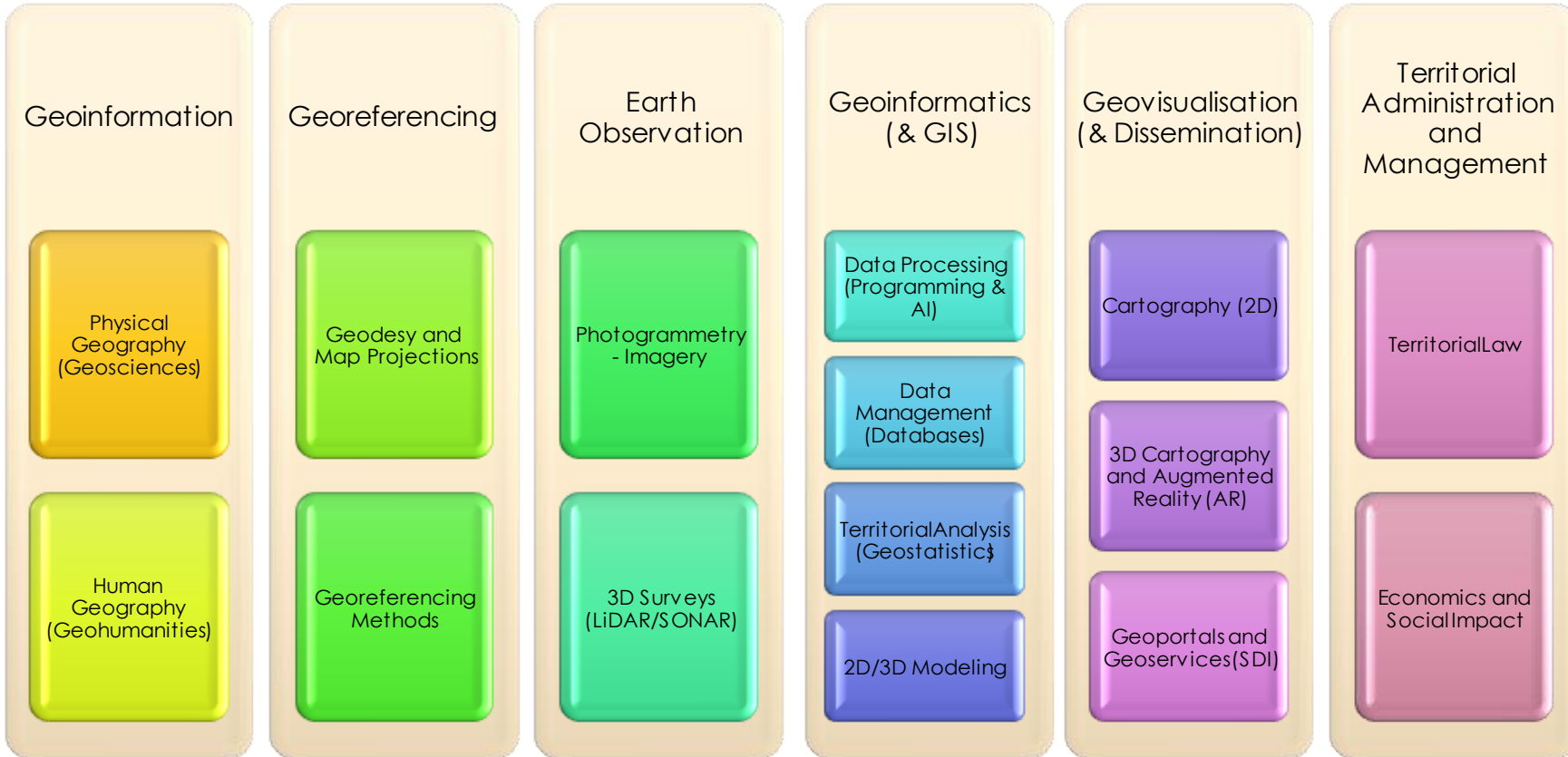
Are we identified by the same name in all countries?

Do all professionals do the same job and perform the same functions?

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THIS IS GEOMATICS ENGINEERING

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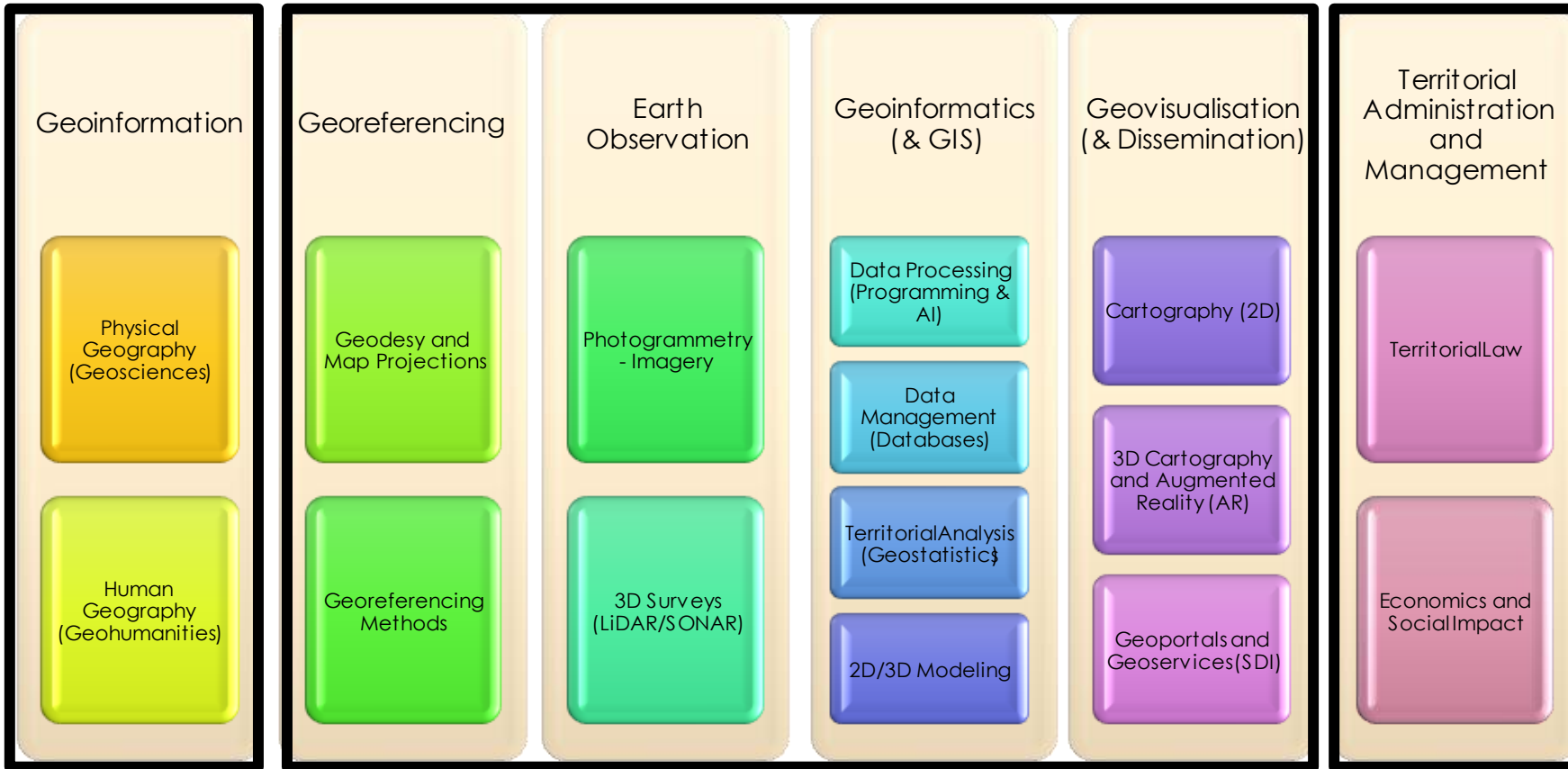
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THIS IS GEOMATICS ENGINEERING

(FOR ME....)

- BACHELOR'S DEGREE-

GEOSPATIAL (GEOGRAPHICAL) SCIENCE

+

TECHNIQUES

+

TERRITORIAL ADMINISTRATION / MANAGEMENT / GOVERNANCE

(OUR WORLD)

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Geoinformation

Physical Geography
(Geosciences)

Human Geography
(Geohumanities)

Georeferencing

Geodesy and
Map Projections

Georeferencing
Methods

Earth
Observation

Photogrammetry
- Imagery

3D Surveys
(LiDAR/SONAR)

Geoinformatics
(& GIS)

Data Processing
(Programming &
AI)

Data
Management
(Databases)

Territorial Analysis
(Geostatistics)

2D/3D Modeling

Geovisualisation
(& Dissemination)

Cartography (2D)

3D Cartography
and Augmented
Reality (AR)

Geoportals and
Geoservices (SDI)

Territorial
Administration
and
Management

Territorial Law

Economics and
Social Impact

LAND SURVEYOR

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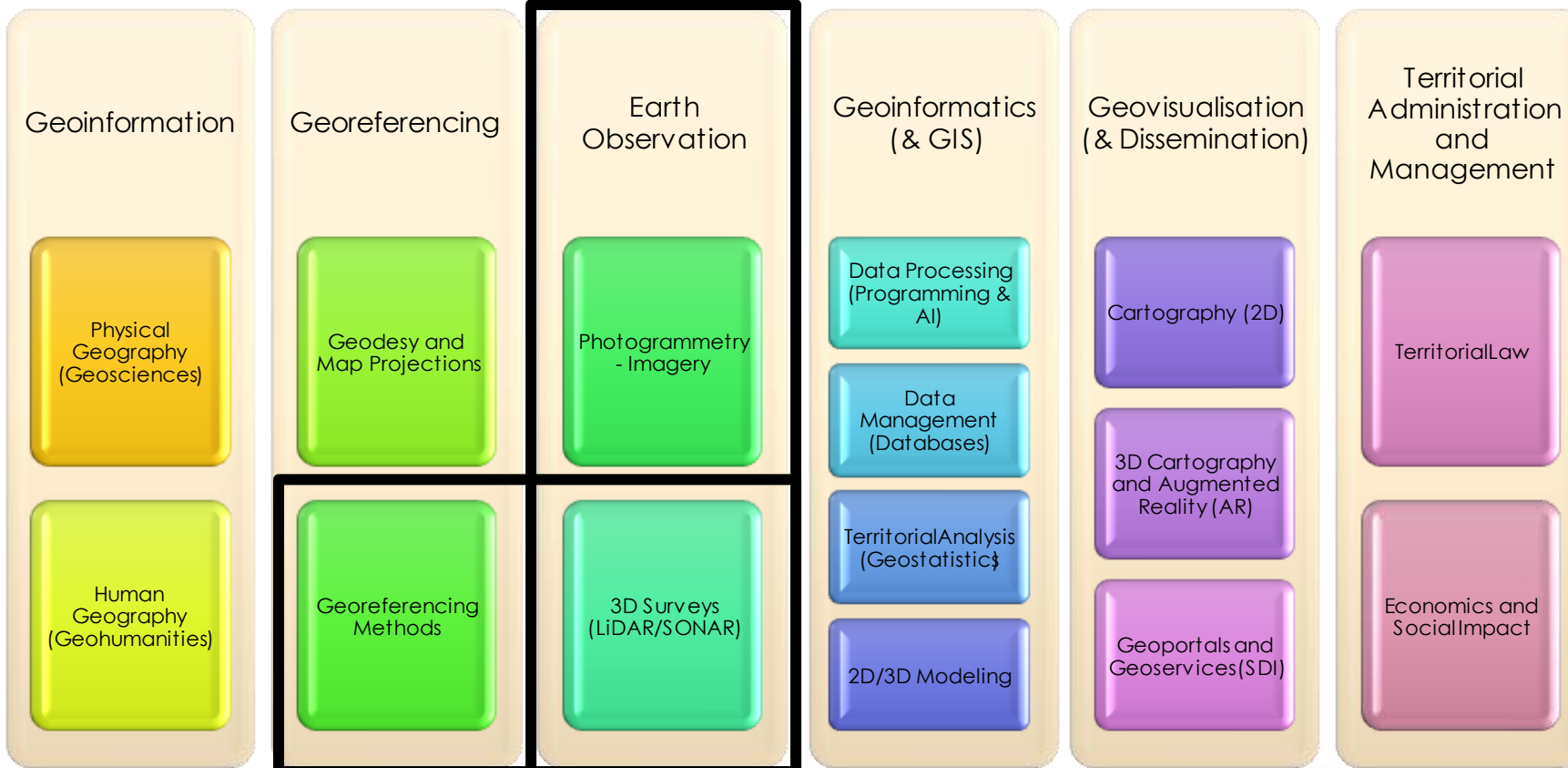


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SURVEYOR

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GEODESIST
(MATHEMATICIANS AND
PHYSICISTS)

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CARTOGRAPHER

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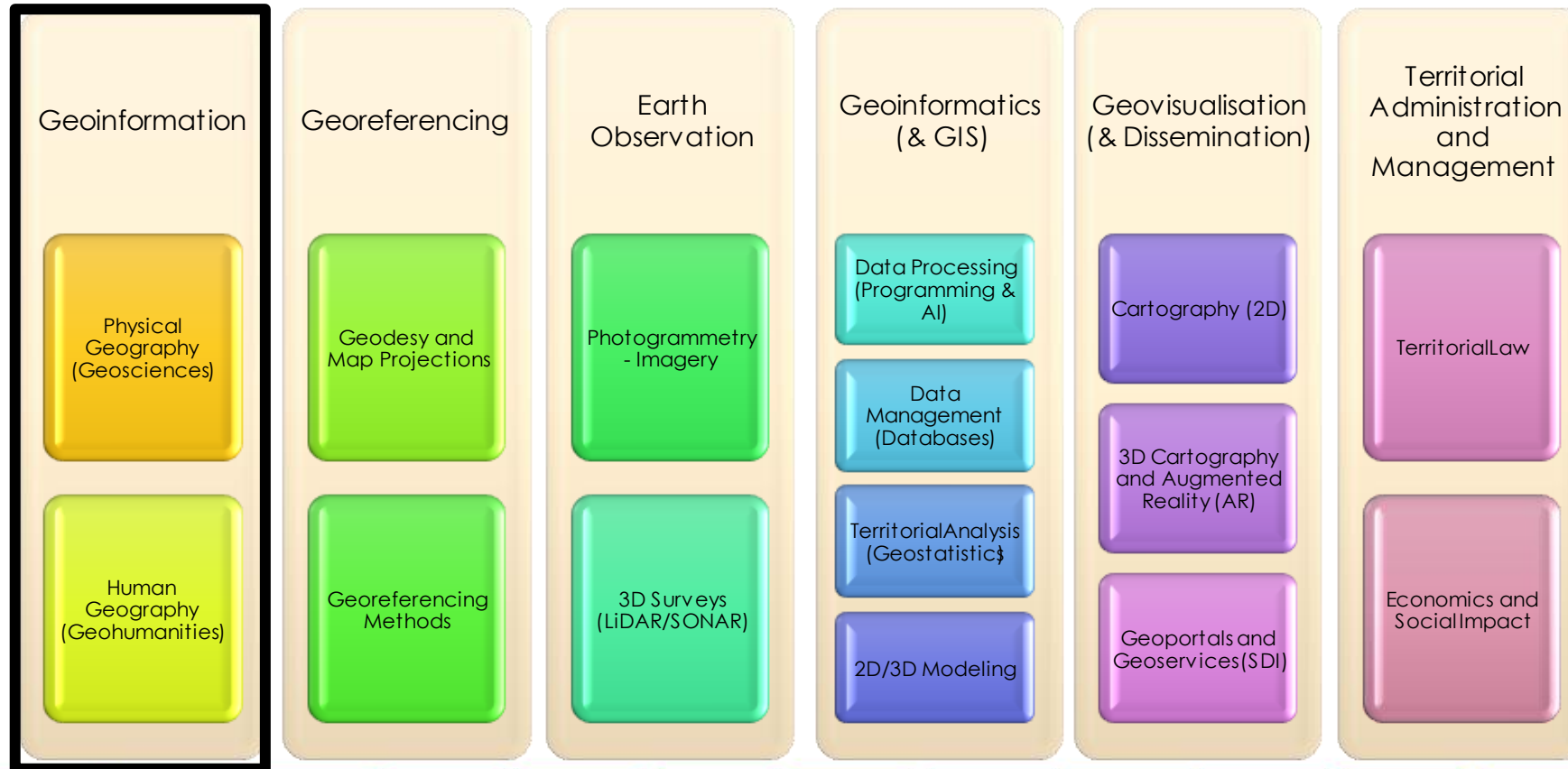


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Economics and
Social Impact

COMPUTER SCIENTIST

-
GIS SPECIALIST

-
DATA ENGINEER

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LAND ADMINISTRATION SPECIALIST

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GEOMATICS ENGINEER

CARTOGRAPHER

GEOGRAPHER

GEODESIST

COMPUTER SCIENTIST

EARTH OBSERVATION
SPECIALIST

SURVEYOR

-

GIS SPECIALIST

-

DATA ENGINEER

LAND ADMINISTRATION
SPECIALIST

Land, Aerial, Satellite/Spatial

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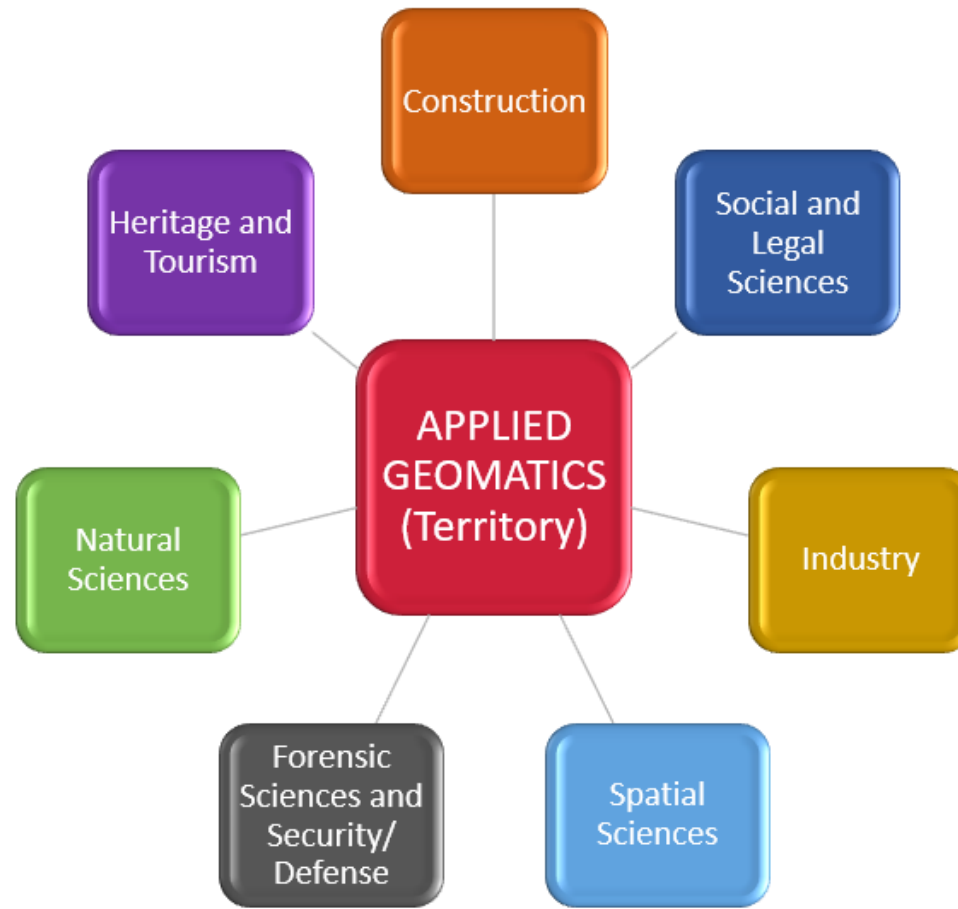
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MASTER'S DEGREE



TERRITORIAL GOVERNANCE



APPLIED GEOMATICS BY SPECIALIZATION

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WORLDWIDE MAP VIEWER INVENTORY OF GEOMATICS STUDIES



+ 350 Universities
(Asia and Africa in progress)

https://professorangelcolladospain.on.driv.tw/Geomatics_MAP/

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But, who am I?



PhD Candidate in Geomatics Engineering
(Land Administration) and in Agricultural
Engineering (Precision Viticulture)

Teaching and research staff of Geomatics
Engineering [**Youngest Geomatics
Professor in Spain**]

(Sociological Geomatics &
Academic/Historical Geomatics)



PROF. ANGEL COLLADO

angel.collado@uclm.es

Awards



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But, who am I?



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FIG YSN Academic Affairs Officer
(FIG Commission 2)

Social Media Officer of FIG
Commission 7 *(Land Administration)*



Spanish Young
Representative in APPAT



Spanish FIG Representative *(Comm. 2 & 7)*
Spanish Academic Affairs Officer

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ILUSTRE COLEGIO OFICIAL DE INGENIERÍA
GEOMÁTICA Y TOPOGRÁFICA

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