# SERVICE
# PORTFOLIO

## FACULTY OF ARCHITECTURE
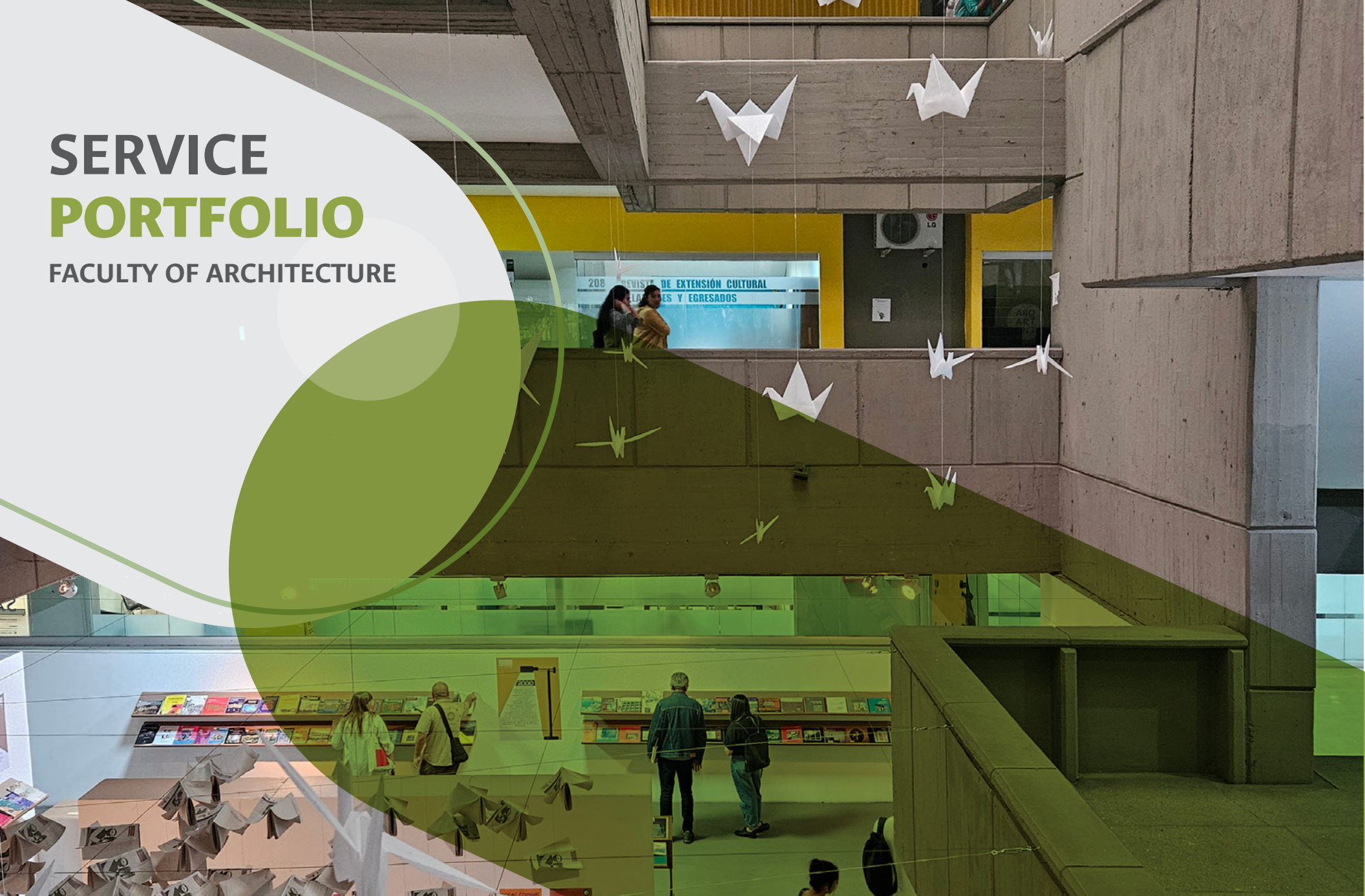


Faculty of Architecture
Medellin Campus

UNIVERSIDAD
NACIONAL
DE COLOMBIA

# TABLE OF
# CONTENTS

# KNOWLEDGE
# BRANDS

They synthesize the knowledge of the research groups of the Faculty of Architecture. These are capabilities oriented to solve problems and overcome challenges in order to improve the quality of life of Colombian communities.

Consolidation of these brands allows the University to have a closer relationship with society and stakeholders such as the public and private sectors, among others.

- Governance and public policy
- Sustainable rural development
- Inclusion and social construction
- Infrastructure
- Smart territories
- Heritage, culture and arts
- Environmental management
- Energy
- Productive sector and innovation
- Water

# GOVERNANCE
# AND PUBLIC POLICY

Territorial management and
institutional framework

- Development plans and land-use planning.
- Assessment of the impact of governmental plans, programs and projects.
- Formulation and evaluation of public policy.
- Political and constitutional culture for participation.
- Selection of human resources.
- Organizational culture.
- Public habitat and housing policy.

# Research
# Groups

Brand: Governance and Public Policy

**1** *Urban-Regional Dynamics Group*
**Iván Ricardo Castro Díaz**
ircastrod@unal.edu.co

**2** *School of Habitat Group - CEHAP*
**Mónica Elizabeth Mejía Escalante**
memejiae@unal.edu.co

# SUSTAINABLE
# RURAL DEVELOPMENT
## Food security and social security

- Clean production systems.
- Sustainable rural development.
- Management of rural social capital.
- Community organization.
- Quality of life.

# Research
# Groups

Brand: Sustainable Rural Development

**1** *Urban-Regional Dynamics Group*
**Iván Ricardo Castro Díaz**
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**2** *Research Group on Energy, Environment and Technology (EMAT)*
**Ader A. García Cardona**
agarcia@unal.edu.co

**3** *Construction Research Group*
**Juan Enrique Torres Madrigal**
juetorresma@unal.edu.co

**4** *GIS and Territory Group*
**Carlos Mario Pérez Nanclares**
cmperezn@unal.edu.co

**5** *Group Rehabilitation of wood, steel, concrete and composite structures*
**César Augusto Echavarría López**
caechavarrial@unal.edu.co

**6** *School of Habitat Group - CEHAP*
**Mónica Elizabeth Mejía Escalante**
memejiae@unal.edu.co

# INCLUSION AND
# SOCIAL CONSTRUCTION

Equity, rights, participation and social innovation

- Serving vulnerable populations.
- Gender perspective.
- Promotion of community and productive organizations.
- Social diagnostics.
- Social impact.
- Human rights.
- Equity policies.
- Characterization of social actors in particular problems.
- Socio-demographic profiles.

# Research
# Groups

Brand: Inclusion and Social Construction

**1** *Urban-Regional Dynamics Group*
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**Mónica Elizabeth Mejía Escalante**
memejiae@unal.edu.co

**5** *Construction Research Group*
**Juan Enrique Torres Madrigal**
juetorresma@unal.edu.co

**6** *Gender observatory*
**Suly María Quinchía**
smquinchiar@unal.edu.co

# INFRASTRUCTURE

## Design and engineering for economic and social development

- Hydraulic infrastructure.
- Materials science and technology.
- Design and construction audits.
- Design, architectural and engineering studies for public facilities and equipment.
- Architectural projects and coordination of technical studies.
- Housing architecture.
- Architectural reuse of structures and infrastructure.
- Site supervision of architectural projects.
- Infrastructure master plans.
- Urban projects.
- Building pathology studies.
- Bioclimatic structures and infrastructures.
- Risk management and mapping.



# Research Groups

Brand: Infrastructure

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**6** *Architecture and Urban Planning Study Group*
**Nathali Montoya Arango**
nmontoya@unal.edu.co

# SMART
# TERRITORIES

## Inclusive, sustainable, safe, cultural and innovative territory

- Urban and regional land-use plans.
- Utility network management.
- Integrated waste management.
- Urban mobility and traffic engineering.
- Environmental monitoring and management.
- Automation of urban process.
- Early threat detection.
- Knowledge districts.
- Smart city.
- Science and technology parks.
- Bioclimatic conditions in cities.



# Research
# Groups

Brand: Smart Territories

**1** *Urban-Regional Dynamics Group*
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**5** *INTERFACE Group*
**Edgar A. Meneses Bedoya**
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**6** *School of Habitat Group - CEHAP*
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**7** *Architecture and Urban Planning Study Group*
**Nathali Montoya Arango**
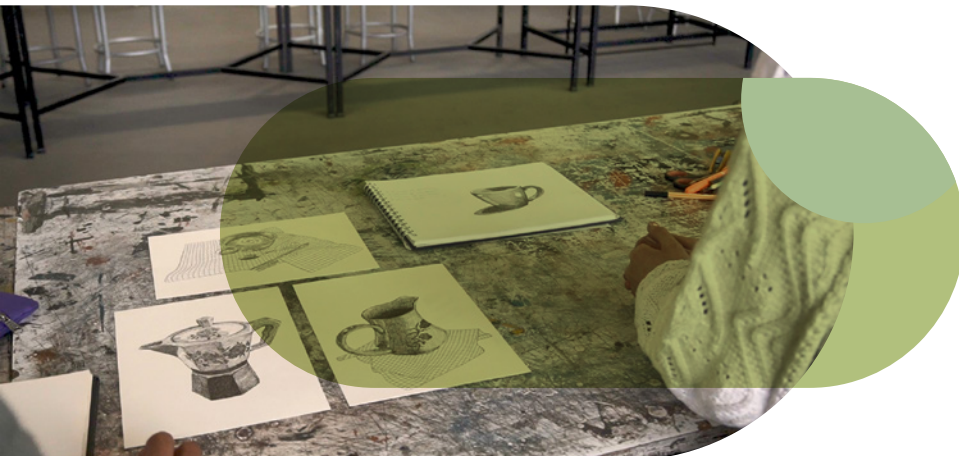nmontoya@unal.edu.co

**8** *Arts Research Group*
**Fernando Escobar Neira**
fescobarne@unal.edu.co

# HERITAGE,
# CULTURE AND ARTS
## Management, identity and creation

- Tangible and intangible heritage.
- Social appropriation of knowledge.
- Citizen culture.
- Diagnosis and intervention of cultural heritage.
- Formulation and evaluation of cultural management projects.
- Image and artistic creation projects.
- Artistic and musical training projects.
- Historical, architectural and urban assessment.
- Cultural sociology.
- Curatorship and museography.

# Research
# Groups

Brand: Heritage, Culture and Arts

**1** *Arts
Research Group*
**Fernando Escobar Neira**
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**2** *GIS and
Territory Group*
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**3** *School of Habitat
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**4** *Architecture and
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**Nathali Montoya Arango**
nmontoya@unal.edu.co

**5** *Construction
Research Group*
**Juan Enrique Torres Madrigal**
juetorresma@unal.edu.co

# ENVIRONMENTAL MANAGEMENT

## Climate monitoring and change

- Environmental diagnosis.
- Environmental information system.
- Environmental monitoring, control and follow-up.
- Scientific expeditions.
- Ecosystem change diagnostics and studies.
- Watershed management and planning.

## Research Groups

Brand: Environmental Management

**1** *Research Group on Energy, Environment and Technology (EMAT)*

**Ader A. García Cardona**
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**2** *GIS and Territory Group*

**Carlos Mario Pérez Nanclares**
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**3** *School of Habitat Group - CEHAP*

**Mónica Elizabeth Mejía Escalante**
memejiae@unal.edu.co

**4** *Urban-Regional Dynamics Group*

**Iván Ricardo Castro Díaz**
ircastrod@unal.edu.co

# ENERGY

## Communities, organizations, competitiveness and development

- Energy efficiency.
- Alternative and renewable energies.
- Energy sustainability.

# Research Groups

Brand: Energy

**1** *Research Group on Energy, Environment and Technology (EMAT)*

**Ader A. García Cardona**
agarcia@unal.edu.co

**2** *Construction Research Group*

**Juan Enrique Torres Madrigal**
juetorresma@unal.edu.co

# WATER

## Planning, management and development

- Land use plans for island and coastal cities.
- Marine and coastal industries.
- Marine and coastal territorial development.
- River industries (rivers, seas and oceans).
- River territorial development (rivers, seas and coasts).
- Autochthonous stilt-house architecture.
- Management plans around water bodies (dams, lakes and rivers).

# Research Groups

Brand: Water

**1** *School of Habitat Group - CEHAP*
**Mónica Elizabeth Mejía Escalante**
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**2** *Urban-Regional Dynamics Group*
**Iván Ricardo Castro Díaz**
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**3** *Architecture and Urban Planning Study Group*
**Nathali Montoya Arango**
nmontoya@unal.edu.co

**4** *Research Group on Energy, Environment and Technology (EMAT)*
**Ader A. García Cardona**
agarcia@unal.edu.co

**5** *Transepto. Architecture without borders*
**Diego Francisco González Rico**
difgonzalezri@unal.edu.co

**6** *Construction Research Group*
**Juan Enrique Torres Madrigal**
juetorresma@unal.edu.co

# PRODUCTIVE SECTOR AND INNOVATION

## Organizations, competitiveness and development

- Sustainable regional and municipal productive projects.
- Design and development of new products.
- Operation simulation and modeling.
- Process automation.
- Productive innovation.
- Entrepreneurship.
- Social and productive innovation centers.
- Open innovation models.
- Entrepreneurship processes.

## Research Groups

Brand: Productive Sector and Innovation

**1** *Research Group on Energy, Environment and Technology (EMAT)*

**Ader A. García Cardona**
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**2** *GIS and Territory Group*

**Carlos Mario Pérez Nanclares**
cmperezn@unal.edu.co

**3** *Construction Research Group*

**Juan Enrique Torres Madrigal**
juetorresma@unal.edu.co

# LABORATORIES RELATED
## TO KNOWLEDGE BRANDS

For research, extension
and academic services

- Construction Laboratory.
- Laboratory of Representation Media (virtual production, graphing and FABLab).
- Laboratory of Bioclimatic Architecture.
- Laboratory of Arts (digital and documentary production, photography, graphic arts, sculpture, drawing and painting).

# ALUMNI
## RELATIONS OFFICE
Strengthening ties with alumni and generating spaces for their return, participation and recognition

# ACADEMIC
## NETWORKS

**1** *Colombian Association of Urban and Regional Researchers (ACIUR)*

**Suly María Quinchía Roldán**
Scope: National



**2** *Latin American Council of Social Sciences (CLACSO)*

**Ricardo Castro Díaz**
Scope: International



**3** *Network of Latin American Architecture Schools and Faculties (REFAL)*

**Ader Augusto García Cardona**
Scope: International



**4** *Colombian Association of Arts Faculties and Programs (ACOFARTES)*

**Sebastián Alexi Wiedemann Caballero**
Scope: National

# SOCIAL APPROPRIATION OF KNOWLEDGE

## EXHIBITION ROOM (SALA U) AND PUBLISHING CENTER

Dissemination, publication and social appropriation of knowledge

- Curatorships.
- Art exhibitions.
- Local, regional, national and international events.
- Museographic design.
- Scientific and academic publications.
- Dissemination and marketing of publishing projects.



## Associated Units

**1** *Sala U Exhibition Room*
salau_med@unal.edu.co

**Nadia Moreno Moya**
namorenom@unal.edu.co

**2** *Publishing Center*
editorialarq_med@unal.edu.co

**Carolina Salazar Marulanda**
csalazarma@unal.edu.co

**3** *Communications Office*
comunicarq_med@unal.edu.co

**Carlos Eduardo López Piedrahita**
celopezp@unal.edu.co

**4** *Alumni Relations Office*
egresadoarq_med@unal.edu

**Sor Natalia Álvarez Micolta**
snalvare@unal.edu.co

# CONTINUING EDUCATION, PRACTICUMS AND INTERNSHIPS

## Courses and Diplomas:

- Open Offer (Courses and Diplomas open to the public on topics related to the knowledge brands).

- Closed Offer (Courses and Diplomas designed and offered to meet the needs of institutions, companies and/or associations that request them).

## Practicums and Internships:

Practicum and internship students interact with companies from different economic sectors: artistic services, curatorship, construction, urban and regional architecture, among others. Local, national and international business and institutional internships are developed virtually and/or on site.

- Business and institutional internships
- International internships

## Associated Units

**1** **Continuing Education**

edcontinuarq_med@unal.edu.co

**2** **Practicums and Internships**

practicaarq_med@unal.edu.co

# RESEARCH GROUPS
# FACULTY OF ARCHITECTURE

**SCHOOL OF HABITAT - CEHAP**
*Leader:* Mónica Elizabeth Mejía Escalante
*MINCIENCIAS Code:* COL0003839

**CONSTRUCTION RESEARCH GROUP**
*Leader:* Juan Enrique Torres Madrigal
*MINCIENCIAS Code:* COL0051068

**URBAN-REGIONAL DYNAMICS**
*Leader:* Iván Ricardo Castro Díaz
*MINCIENCIAS Code:* COL0003589

**RESEARCH GROUP ON ENERGY, ENVIRONMENT AND TECHNOLOGY (EMAT)**
*Leader:* Ader Augusto García Cardona
*MINCIENCIAS Code:* COL0051219

**ARTS RESEARCH GROUP**
*Leader:* Fernando Célimo Escobar Neira
*MINCIENCIAS Code:* COL0051049

**ARCHITECTURE AND URBAN PLANNING STUDY GROUP**
*Leader:* Nathali Socorro Montoya Arango
*MINCIENCIAS Code:* COL0027797

# RESEARCH GROUPS
## FACULTY OF ARCHITECTURE

**REHABILITATION OF**
**WOOD, *STEEL*, CONCRETE AND**
**COMPOSITE STRUCTURES**
*Leader:* César Augusto Echevarría López
*MINCIENCIAS Code:* COL0072667

**TRANSEPTO, ARCHITECTURE**
**WITHOUT BORDERS**
*Leader:* Diego Francisco González Rico
*MINCIENCIAS Code:* COL0184547

**REPRESENTATION OF THE BUILDING**
**AND THE TERRITORY (REEDYTE)**
*Leader:* Esneda Beatriz Arrieta Neira
*MINCIENCIAS Code:* COL0092605

**MATERIALS**
*Leader:* Juan Camilo Restrepo Gutiérrez
*MINCIENCIAS Code:* COL0185669

**SPATIAL *STUDIES* SEMINAR**
*Leader:* Gilda María Wolf Amaya
*MINCIENCIAS Code:* COL0211018

**INNOVATION AND *CONSTRUCTION***
**MANAGEMENT GROUP (IGC)**
*Leader:* Carlos Andrés Rúa Machado
*MINCIENCIAS Code:* COL0232199

# ACTIVE RESEARCH
# INCUBATORS 2025

**1** *Aplicatto*

**Juan Enrique Torres Madrigal**
aplicatto_med@unal.edu.co
Main OCDE classification: Engineering and Technology

**2** *Rehabilitation of wood, steel, concrete and composite structures*

**César Augusto Echavarria López**
caechavarrial@unal.edu.co
Main OCDE classification: Engineering and Technology

**3** *CHAGRA*

**Juan Carlos Ceballos Guerra**
jceballo@unal.edu.co
Main OCDE classification: Social Sciences

**4** *Bioclimatic design of facades for the Andean tropics*

**Ader Augusto García Cardona**
agarcia@unal.edu.co
Main OCDE classification: Humanities

**5** *Research incubator on construction materials (SIMC)*

**Juan Carlos Ochoa Botero**
jcochoa@unal.edu.co
Main OCDE classification: Engineering and Technology

**6** *Research incubator on construction management (SIGCON)*

**Carlos Andrés Rúa Machado**
caruama@unal.edu.co
Main OCDE classification: Engineering and Technology

**7** *Urban and territorial land-use planning*

**Emma Teresa Coutin Castro**
etcoutin@unal.edu.co
Main OCDE classification: Social Sciences

**8** *Building sciences and the built environment*

**Carlos Alberto Mejía Barrera**
camejiab@unal.edu.co
Main OCDE classification: Humanities

# ACTIVE RESEARCH
## INCUBATORS 2025

**9** *Cuerpolíticas: Research incubator on advanced studies on performance, action art and activism*

**Natalia Restrepo Restrepo**
narestrepore@unal.edu.co
Main OCDE classification: Humanities

**10** *Research incubator on expanded graphics*

**Jairo Augusto Solórzano Ariza**
asolarz@unal.edu.co
Main OCDE classification: Humanities

**11** *Epistemologies and politics of research from the arts (EPIA)*

**Nadia Moreno Moya**
namorenoma@unal.edu.co
Main OCDE classification: Humanities

**12** *Research incubator on Spatial Studies*

**Gilda María Wolf Amaya**
gwolf@unal.edu.co
Main OCDE classification: Humanities

**13** *GIS and Territory*

**Esneda Beatriz Arrieta Neira**
ebarrietan@unal.edu.co
Main OCDE classification: Engineering and Technology

**14** *Binders and construction research group (GRINCO)*

**Ary Alain Hoyos Montilla**
aahoyosm@unal.edu.co
Main OCDE classification: Engineering and Technology

**15** *Architecture: geo-climate and daily life*

**John Ferney Arango Flórez**
jfarang3@unal.edu.co
Main OCDE classification: Humanities

**16** *Research incubator on circular engineering for the construction industry (SICC)*

**Yhan Paul Arias Jaramillo**
ypariasj@unal.edu.co
Main OCDE classification: Engineering and Technology

# SEMILLEROS
# ACTIVOS 2025

**17** *Articulating laboratory for transdisciplinary, sensitive and ecological practices (Lab a-PTSE)*

**Sebastian Alexi Wiedemann Caballero**
lab_aptse_med@unal.edu.co
Main OCDE classification: Humanities

**18** *Spectrum. Light, color and space laboratory.*

**Natalia Echeverri Arango**
nechevea@unal.edu.co
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**19** *Use of public space in the contemporary city*

**Diego Francisco Gonzalez Rico**
difgonzalezri@unal.edu.co
Main OCDE classification: Humanities

**20** *Contemporary community art practices*

**Luis Eduardo Serna Vizcaino**
leserna@unal.edu.co
Main OCDE classification: Humanities

**21** *Instruction in Architecture*

**Diego Alonso López Chalarca**
cuestion23_med@unal.edu.co
Main OCDE classification: Humanities

# GRADUATE
# PROGRAMS

**1** ## Specialization

### Architecture
1. Real Estate Management
2. Urban Design
3. Urban and Regional Planning

### Construction
1. Architectural inspection of projects and sites
2. Building Pathology

**2** ## Master's degrees

### Architecture
1. Architecture
2. Urban and Regional Studies

### Construction
1. Construction
2. Habitat

### Plastic Arts
1. Plastic and Visual Arts

**3** ## Doctoral degree

### Architecture
1. Doctoral degree in Urban and Territorial Studies