Analysis of the methodologies of risks applied in the sector of the Construction

EIDEIC III

05/18/2017

Doctorate in Civil Engineering

Directors: D. Daniel Castro Fresno

D. Jorge Rodríguez Hernández (and Tutor)

Made by: Sara Sánchez Matellanes

Academic training:

- Civil Engineer
- Master in Environmental Engineering
- Master in Prevention of Occupational Hazards

Doctorate in Civil Engineering. Title:

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Goals:

- Improve comprehensive risk management in the life of an infrastructure.
- Design a simple and dynamic risk analysis methodology.
- Validate the methodology of risk analysis.

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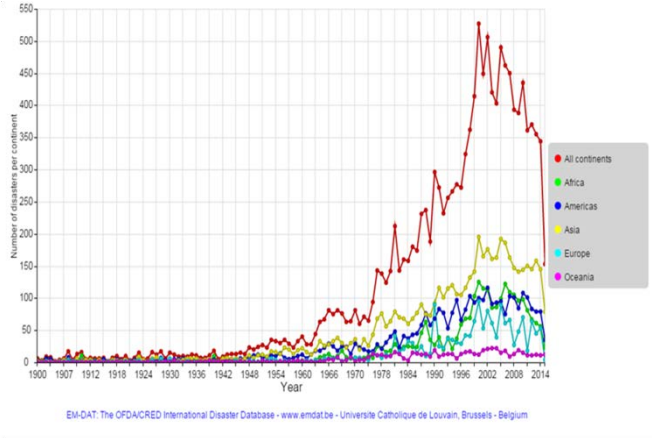
Escuela de Doctorado — UC UNIVERSIDAD DE CANTABRIA

Abstract:

		Phase \ Risk	Labor	Environmental	Natural	Climate change
Integral management	Project stage	Planning	√	√	√	X
		Design	√	√	√	X
		Construction	√	√	√	X
	Infrastructure stage	Operation (maintenance, conservation, rehabilitation)	√	√	√	X
		End of life (Replacement and / or demolition)	√	√	√	X

Picture 1. Sekiu, WA, 2009. State Route 112 , Adam DuBrowa/FEMA.
Picture 2. Jamestown, Colorado, 2013. Steve Zumwalt/FEMA.



Operating phase, useful life of an infrastructure:

- Risks associated with climate change not evaluated
  - € maintenance
  - Human, environmental and material damages.

Need for: resilience, sustainability

It is necessary to validate a methodology of analysis of risks associated with climate change and tool for decision making during the maintenance phase.

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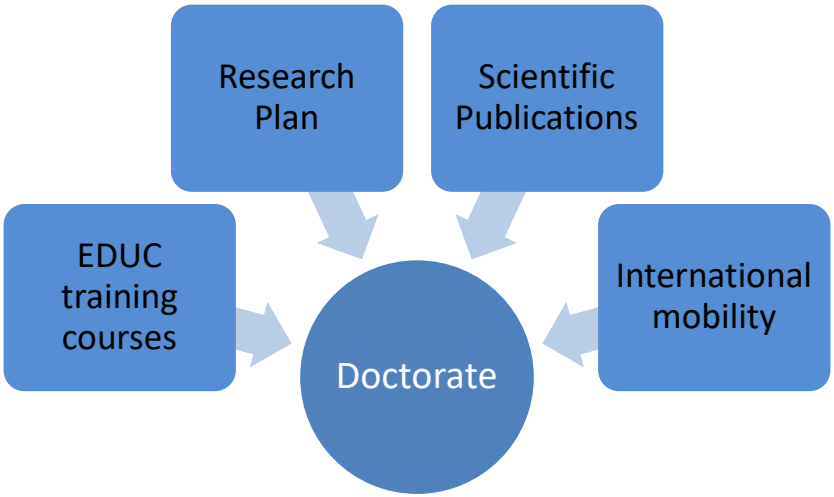

Requirements:

EDUC training courses

- EDUC Basic course
- EDUC Advanced course

Research Plan (CB11, CB14, CA01, CA03, CA06)

Scientific Publications (CB12, CB13, CB 15, CB16, CA02)

International mobility (CA04)

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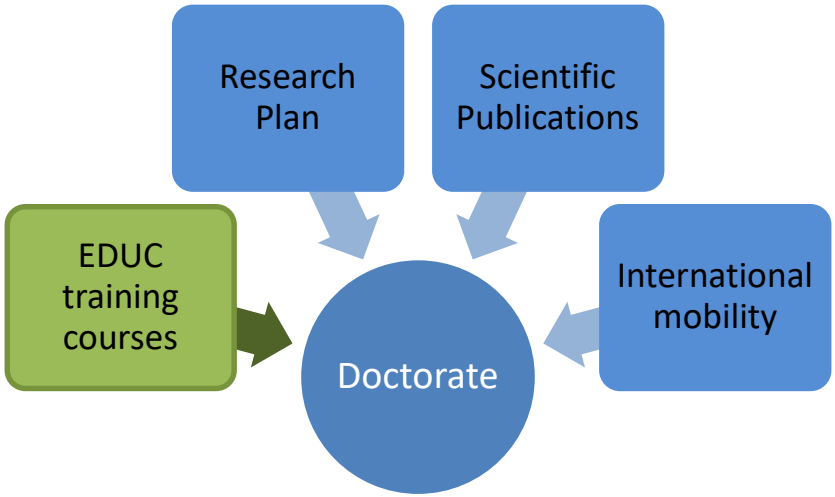

Training courses

- EDUC Basic course training (2013).
- EDUC Advanced course training (2015).

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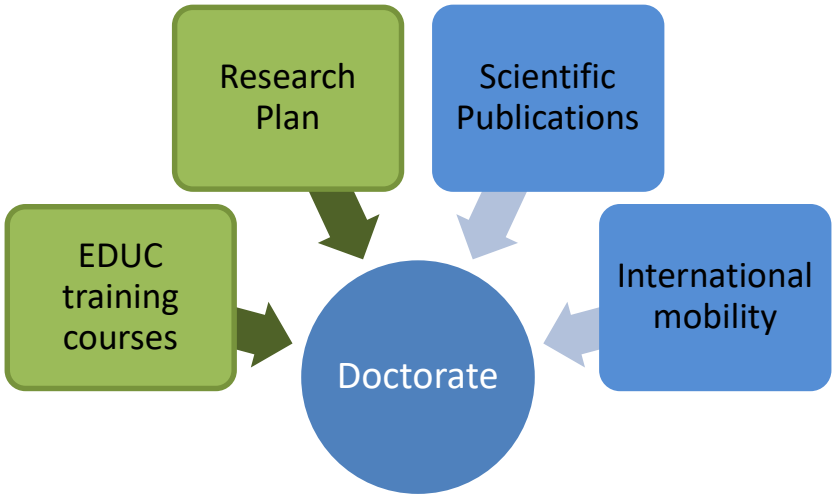

Research Plan (CB11, CB14, CA01, CA03, CA05, CA06)

- ✓ Training courses:
  - Statistics for research in construction engineering I and II (2016).
  - Introduction to Resilient Urban services with HAZUR® (2016).
  - Introduction to Sustainable Construction (2016).
  - Environmental challenges in a changing world (2016).
  - How to publish in impact magazines (2016).
- ✓ DAD and PI.

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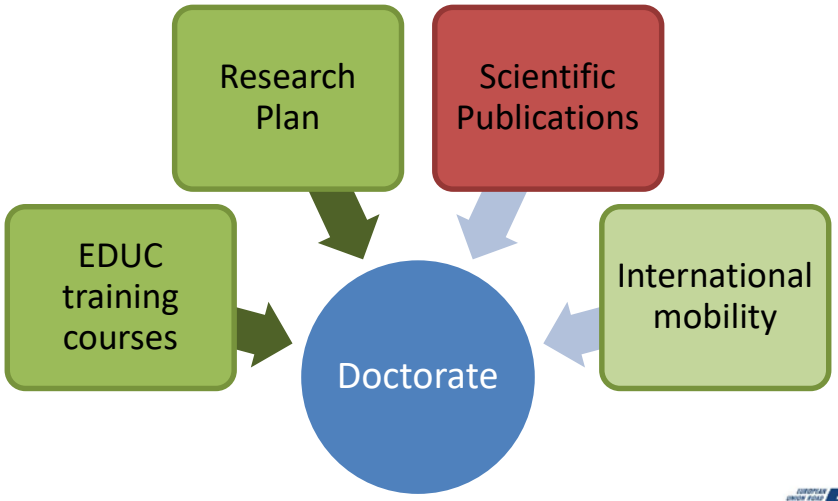

Scientific Publications (CB12, CB13, CB15, CB16, CA02)

International mobility (CA04)

- European Road Infrastructure Congress. Leeds (U.K., October 2016) √
- The first International Interuniversity Symposium on Infrastructure Management (IISIM). Milan (Italy, June 2017) ¿?
- The 45th European Transport Conference. Barcelona (Spain, October 2017) ¿?

European Road Infrastructure Congress

1st European Road Infrastructure Congress | 18-20 October 2016 | Leeds, United Kingdom

Analysis of the Application of Risk Management Methodologies in Construction

Sara Sánchez-Matellanes [a]1, Jorge Rodriguez-Hernandez [b], Daniel Jato-Espino [b], Felipe Collazos-Arias [c]

Other congresses

- V Jornadas Doctorales. Palma de Mallorca (Spain, February 2017) √

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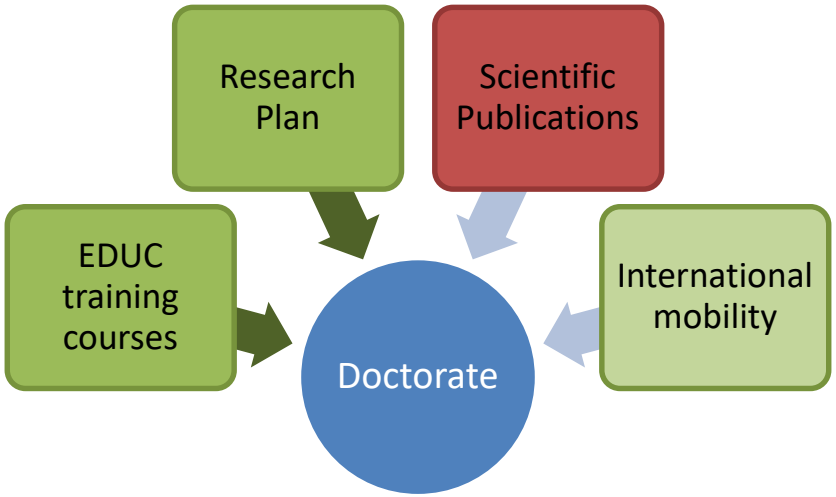

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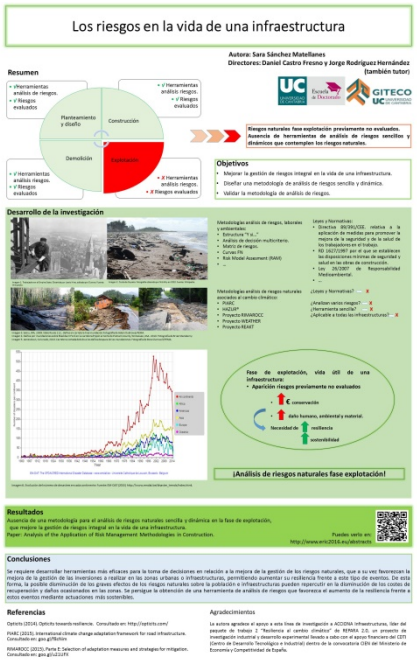

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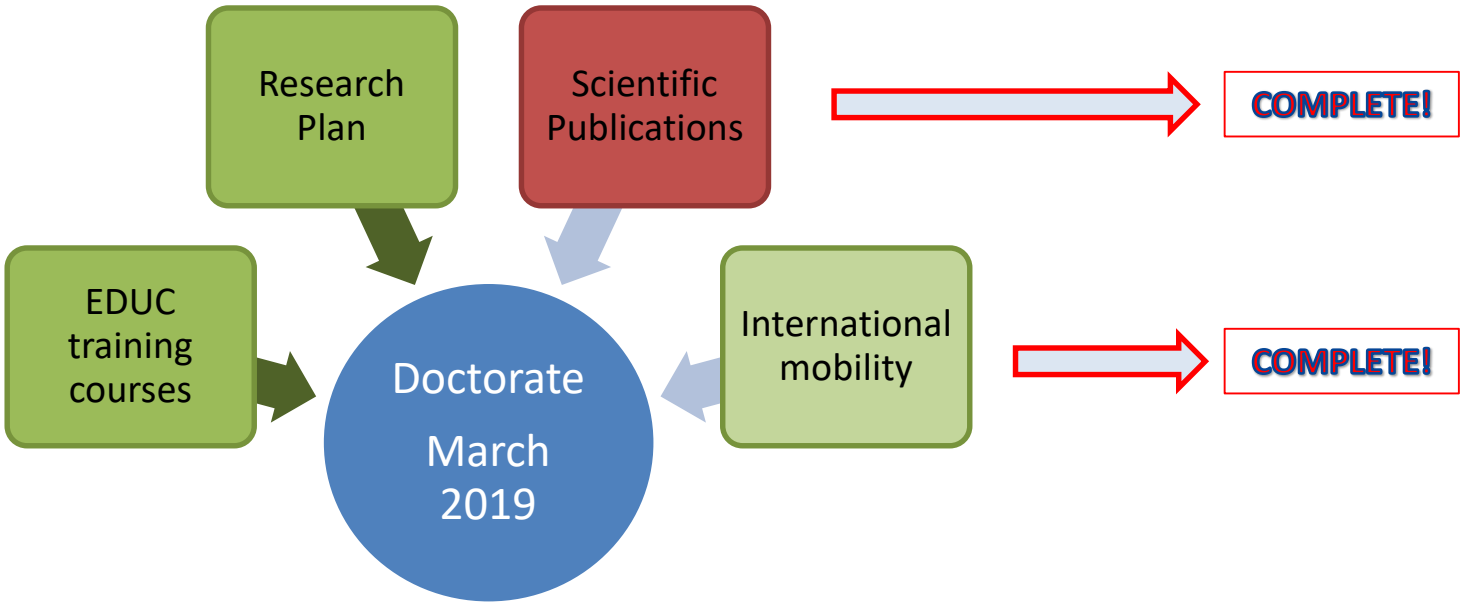

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Thank you!