



INTERNATIONAL MEETING OF DOCTORAL STUDENTS IN CIVIL ENGINEERING (EIDEIC) 2020

Human behaviour analysis to different factors during emergency situations

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Second-year doctorate

Expected thesis date: 2023

State of achievement of competences

Human behaviour analysis
to different factors during
emergency situations



Compulsory multidisciplinary training:

COMPLETED



- 59h Basic Course (realizing the final course of 15 h duration).
- 41h Advance Course.

Favorable assessment first-year Research Plan (PI) :

DEVELOPED ACTIVITIES

- Relation of the previous more relevant researches.
- Findings made to date.
- Define necessary tools for experiments and computational simulation models.
- Database.
- Attendance to 4 seminars or conferences.



RELATED COMPETENCES

- CB11*- Systematic understanding of a field of study, skills and research
- CB14*- Skill to carry out a critical analysis of assessment and synthesis of new ideas
- CB01*- Cope in contexts in which there is little specific information
- CB03*- Design, create, develop and undertake new and innovative projects in the knowledge scope
- CB05*- Integrate knowledges, face complexity and formulate judgements with limited information
- CB06*- Intellectual criticism and defence of solutions

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International scientific publications:

DEVELOPED ACTIVITIES

-Two publications in Safety Science.



RELATED COMPETENCES

- CB12- Skill to conceive, design and implement a substantial process of research
- CB13- Skill to contribute to the enlargement of the knowledge limits through an original research
- CB15- Skill to communicate with the academic and scientific community and general society about the scope of knowledge
- CB16- Skill to encourage (academic and professional contexts) the scientific, technological, social, artistic or cultural progress
- CB02- Find the key questions to be answered to solve a complex problem

- Speaker at the virtual congress CIT2020 – special session for young researchers (June 2020).

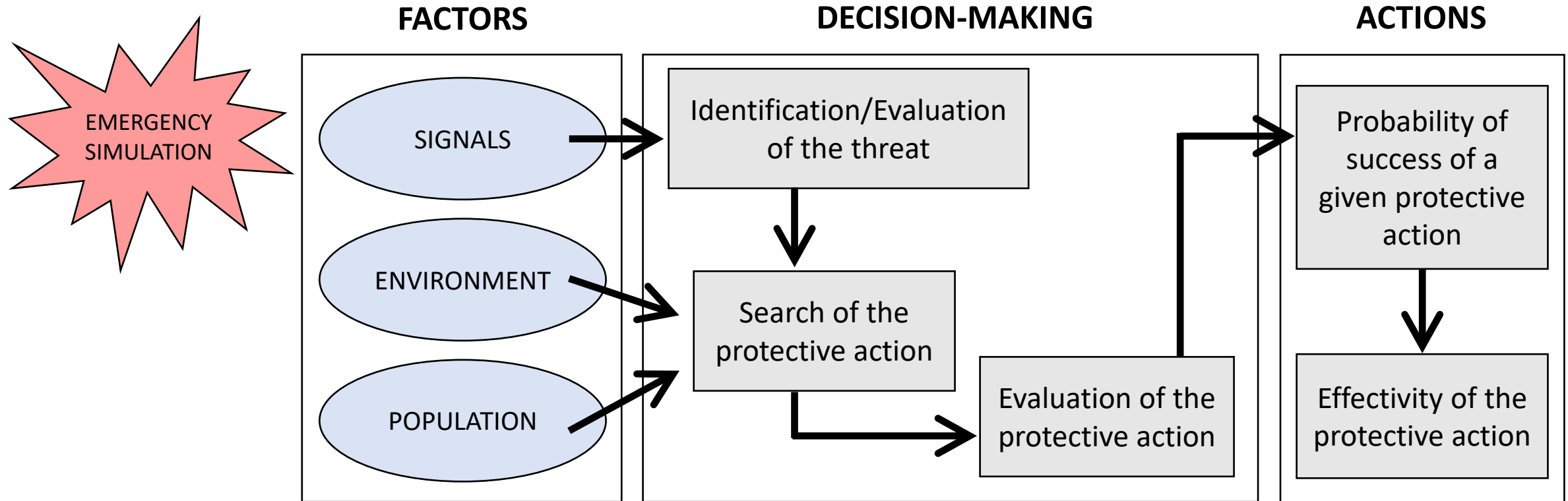
International mobility: → *procedures will begin this year*

Research achievements

Human behaviour analysis
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OBJECTIVE

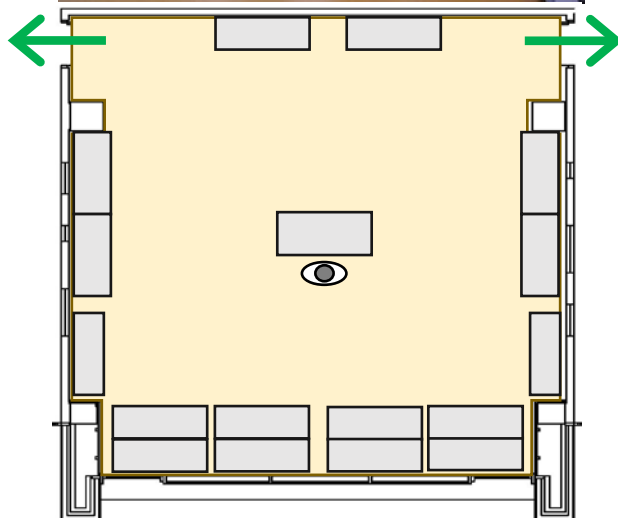
Analyze and understand why people make one or other decision that leads them to perform one or other action.



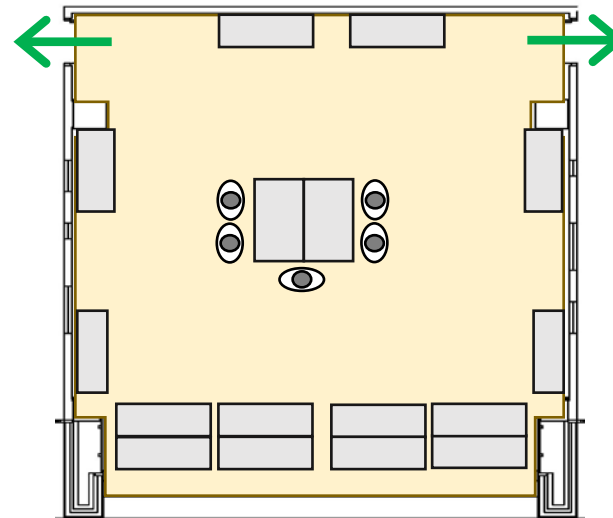
EXPERIMENTAL METHODOLOGY

- 73 participants (18-60 years) - Information shared with participants: security information and evacuation plan
- Activity in the experiment room: a questionnaire - Building alarm were activated after 30 seconds

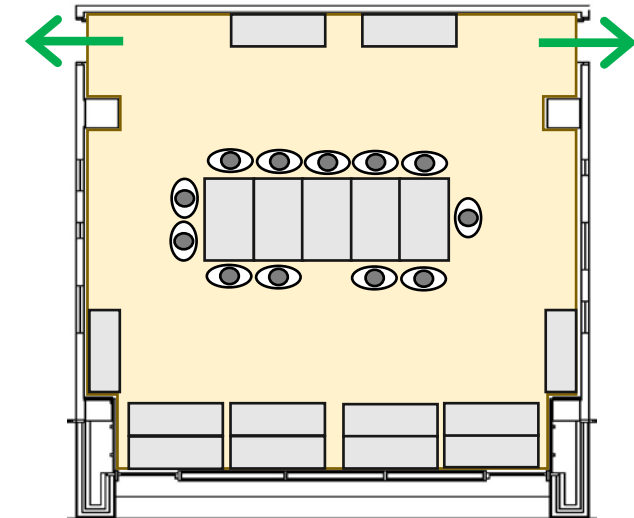
INDIVIDUAL (23 trials)



FIVE-PERSON GROUP (5 trials)



TWELVE-PERSON GROUP (2 trials)



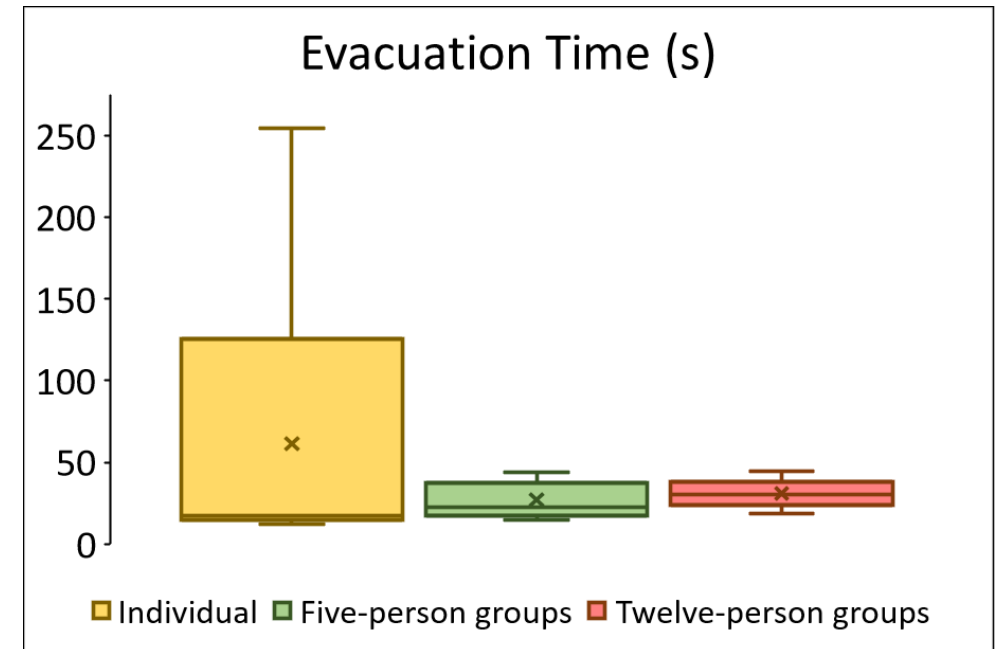
Research achievements

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RESULTS

	Individual	Five-person groups	Twelve-person groups
Sample size	23	25	25
Average(s)	61.48	26.94	30.78
Standard Deviation (s)	80.04	10.26	7.98
Minimum (s)	12.31	14.41	18.78
Maximum (s)	254.31	43.81	44.41
95 Percentile (s)	221.06	41.99	43.28



CONCLUSIONS

- Interacting with others can lead evacuees to respond faster and more effectively, suggesting that social interactions maybe help improve decision-making in emergencies.
- Greater behavioral cohesion in groups than in individuals, suggesting that people who are alone do not always respond faster and participants in the same group tend to perform the same actions.

Continue the literature review, updating the chronology and state-of-the-art.

Design the experiments to analyse remain factors.

Increase the attendance to seminars and conferences.

Take part as speaker in a Congress.

Publish a paper in a journal with high impact.

Begin the procedures for an international mobility.