



# ISCRAM 2018

Rochester Institute of Technology  
Rochester, NY, USA

## POSTER: Identifying Semantic Domains in Emergency Scenarios

15<sup>th</sup> International Conference on  
INFORMATION SYSTEMS FOR CRISIS RESPONSE AND  
MANAGEMENT

### “Visualizing Crisis”

Workshops and Doctoral Symposium May 20<sup>th</sup>, 2018

Conference May 21<sup>nd</sup>-23<sup>th</sup>, 2018

**Rochester New York - USA**  
Rochester Institute of Technology (RIT)  
<https://iscram2018.rit.edu/>

I am submitting the poster document as a follow-up to the "Accept WiPe paper submission as a poster"

#### INTRODUCTION TO THE POSTER

*Provide a brief description of the context of the poster. For example, is it dedicated to present a PhD research work, a funded collaborative project, the contributions of a research team... around 10 lines of such description should be provided.*

This poster presents part of a PhD research work which is focused on improving the communication between organizations in emergency response scenarios by tackling semantic interoperability problems. To do so, we are applying ontology matching techniques enriched with domain information and domain specific terminologies. Due to the

heterogeneity between agencies in emergency scenarios, it is difficult to identify the domains which are involved in these situations. In this poster it is presented a categorization of emergency domains that has been identified by analysing papers published in proceedings of ISCRAM and ISCRAM-med conferences. The main value of this resource is that it can be used to identify the terms which are specific of a particular domain. This sets of terms will be used to carry out word sense disambiguation to reduce ambiguity in emergency scenarios.

## POSTER SUBJECT

*Provide an abstract of the content of the poster. If possible include the big-picture of the subject.*

Emergency scenarios are characterised by the participation of multiple and diverse organizations which come from different areas. This diversity is enriching in terms of expertise and approaches to tackle problems, however it also provokes misunderstandings caused by semantic interoperability problems. There are some approaches which propose tackling these problems by using domain adaptation algorithms. Nevertheless, it is not trivial their application in emergency scenarios where the term “domain” is used in many different ways, not being clear either what it means or which domains are involved in these scenarios. In this poster, we identify semantic domains involved in emergency scenarios by analysing papers published in proceedings of ISCRAM and ISCRAM-med conferences.

As a result, a categorisation of these domains has been developed, with the aim of providing a resource that can be used by domain adaptation algorithms to tackle problems such as those involving semantic interoperability.

## POSTER PRESENTER

Describe the previous experience of the presenter(s) at ISCRAM or related meetings, and any other qualifications for this responsibility, such as recent papers on the topic you propose. In addition you should note which presenter plan to be at the conference.

	<p><i>Francisco José Quesada Real *</i></p> <p><i>s1580097@staffmail.ed.ac.uk</i></p> <p><i>University of Edinburgh</i></p> <p>He is a PhD student at the University of Edinburgh focusing on improving the exchange of information between agencies in ER scenarios, by using domain-aware matching techniques. During his PhD, he has interacted with different agencies such as the Resilience Department of the Scottish Government or the Spanish 112 organization.</p> <p>He is ISCRAM member since 2017. Last year he attended to the SNACMAN Thematic School at Paris and to ISCRAM 2017. He participated in the Doctoral Colloquium and presented the paper "Improving Dynamic Information Exchange in Emergency Response Scenarios".</p>
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*\*Corresponding Chair*



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