



# ISCRAM 2018

Rochester Institute of Technology  
Rochester, NY, USA

## **POSTER: A flying localization system for the rescue of buried victims**

**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>st</sup>-23<sup>th</sup>, 2018**

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

## INTRODUCTION TO THE POSTER

The Institute of Rescue Engineering and Civil Protection at TH Köln (University of Applied Sciences) participates, together with further universitarian and industrial partners as well as prospective end users, in the joint research project FOUNT<sup>2</sup>. FOUNT<sup>2</sup> aims at developing a flying localization system for the rescue of buried victims after building collapses that can support urban search and rescue teams (USAR). In addition, the implementation of the system is intended to enhance the safety of USAR teams responding to building collapses. The FOUNT<sup>2</sup> system consists of an unmanned aerial vehicle (UAV) equipped with an autonomous landing site detection and a bioradar that detects the breathing movements of victims that are buried under the debris. Important elements of the project are the technical optimization of system components, the implementation of the FOUNT<sup>2</sup> system in the existing command and operation structures and the adaption of the information processes. The three-year development process is supported by an evaluation on a laboratory scale and a validation in a large-scale field exercise. FOUNT<sup>2</sup> is funded by the German Federal Ministry for Education and Research (Program: Research for Civil Security – Innovative Systems for Rescue and Safety).

## POSTER SUBJECT

The poster shows the current status and future development stages of FOUNT<sup>2</sup> and highlights important elements of the process on a timeline. In addition to the research topic, the methodology used so far, the identified system requirements and the results of the scenario development are mentioned. The requirements are subdivided into four topics: “tactical implementation”, “incident related information”, “UAV design” and “user interface design”. As the research project is about to reach its half-way mark in 2018, an outlook on future project objectives is provided, such as evaluation, user training and validation.

# A flying localization system for the rescue of buried victims

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**Technology  
Arts Sciences  
TH Köln**

## POSTER PRESENTER

Lennart Landsberg began his professional career in the field of emergency services by joining the fire department of the city of Cologne in Germany in 2009. With his Bachelor's degree in rescue engineering, he has deepened his research in the field of incident management. His current research deals with the amendment of the German command and control system for fire service operations (FwDV 100). In addition, he conducts research in the field of education and training of emergency response personnel.

Sebastian Schmitz's research focuses on the areas of emergency and crisis management, particularly on mass casualty incidents and urban search and rescue operations. Currently, he manages the joint research project FOUNT<sup>2</sup>. Sebastian began his professional career as a paramedic in pre-hospital and emergency medical care and received a Bachelor's degree in rescue engineering from TH Köln in 2016.

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