

The Center for Healthcare Operations Improvement and Research (**CHOIR**) at the University of Twente announces the 36th talk in the **ORAHS International Seminar Series**.

The ORAHS International Seminars are planned via MS Teams in the late afternoon (Europe), morning (US), or evening (Asia/Pacific) and are part of the [EURO Online Seminar Series](#).

On **21 April 2026, at 16:00 (CEST)**, Dr. Pieter van den Berg (Erasmus University, the Netherlands) will talk about “*Evaluating and Optimizing the Impact of Community First Responders*”.

Please save the date and register for this seminar here:

<https://events.teams.microsoft.com/event/ca189cb2-97e9-4a56-8930-763d2478340d@723246a1-c3f5-43c5-acdc-43adb404ac4d>

**Abstract:** In Community First Responder (CFR) systems, traditional emergency service response is augmented by a network of trained volunteers who are dispatched via an app. A central application of such systems is out-of-hospital cardiac arrest (OHCA), where a very fast response is crucial.

In this paper, we answer the question how many volunteers are needed to achieve a given response time target and how many volunteers should be alerted to maximize their impact. We model the presence of volunteers throughout a region as a Poisson point process, which permits the computation of the response-time distribution of the first-arriving volunteer. For the optimization of alerting strategies, we combine Dynamic Programming and Decision Trees to balance patient survival and volunteer fatigue. We demonstrate these methods through a case study using data from the city of Auckland, New Zealand.

**Bio:** Pieter van den Berg is an associate professor of transportation and logistics at the Rotterdam School of Management, Erasmus University. His research focuses on the application of Operations Research to the logistics of emergency service providers. For many years, he has worked with EMS in the Netherlands, Norway and Australia to improve response times. His recent work focusses on the use of decentralized capacity sources in emergency response. This includes the use of Community First Responders that complement existing services and emergency platforms that operate in countries without a centralized emergency service.

More information about our speaker can be found here:

<https://www.eur.nl/en/people/pieter-van-den-berg>

For more information about our seminar presentations, please follow this link:

<https://www.utwente.nl/en/choir/research/ORAHS-International-Seminar-Series/>

We look forward to seeing you soon and often in the ORAHS International Seminar Series.

CHOIR Group  
University of Twente