Extended Abstract for 2019 Resilience Week Student Competition

Title: Resilience functions of Incident Management Teams during Hurricane Harvey: A Qualitative Analysis

Societies and communities in the modern era are confronted with escalating threats from natural disasters. Thus, resilience of IMTs in the face of adverse events becomes increasingly crucial to ensure the protection of human lives and to return physical and social systems back to a normal state. Previous studies spotlighted different facets of resilience in the incident management domain at either macro- or micro-levels of system hierarchy. In order to provide a holistic picture of resilience of the IMTs located at the mid-level of the hierarchy, this paper documents findings from semi-structured interviews with experienced personnel who worked at the IMTs during Hurricane Harvey. Our major findings include five resilient functions of the IMTs situated in the context of challenges and goals during a hurricane event: i) establishing common operating picture, ii) adopting and adapting plans and protocols, iii) proactive, sacrificing, and innovative decision-making, iv) enhancing resourcefulness and redundancy, and v) learning for improved anticipation and response readiness. In addition, our study also highlights inter-organizational relationships that promote such functions. Following this, we discuss how our findings support existing theories of resilience engineering and joint cognitive system, and further elaborate resilience of a multidisciplinary team in the context of large-scale incident management. As an empirical investigation of resilience of the IMTs, the findings of this paper inform future endeavors for developing better incident information technologies, establishing strategies to harmonize formal emergency operations planning with adaptive actions in the field, and fostering capabilities to learn from incidents.