**Resilience 2.0:**

**Computer-Aided Disaster management**

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**Abstract**

*Many factors (larger population, more dependency on technology, more human-caused interference with the natural systems and equilibria, climate changes, ...) contribute to the seemingly growing number and severity of disasters. Additional exaggeration comes from media coverage. Consequently Disaster Prevention and Disaster Management have to be given increased attention. The ultimate goal of Disaster Management is resilience of the affected system and thus survival of the affected population.*

*We discuss the various ways systems behave in the case of an attack or threat and how to design and structure systems in such a way that a system instead of being fragile (losing its functionality due to the attack) will become resilient (having the capacity ... to bounce back to dynamic stability after a disturbance), or even antifragile (being able to "learn" to improve disaster resilience).*

*Resilience 2.0 identifies a new paradigm: modern Information and Communication Technologies (ICT) are employed as a basis for enabling resilience of a system. ICT provide the basis for sufficient preparation before an attack, for quick recognition, and for effective, efficient reactions to disasters. Only the coordinated intra- and interphase deployment of ICT promises sufficient success and can bring resilience to currently still fragile systems. Especially for the Response/Intervention Phase computer support shows to be considerably different from classical ICT-application. Reasons are extreme time and performance pressure, physical and psychological stress on personnel, potentially damaged ICT-platforms and communication infrastructure, plus unknown and/or adverse natural environment, etc.*

*The basic message of the presentation is that computer-aided disaster management offers a new level of reactivity: we call it Resilience 2.0.*