Main problem

How can the ability to deal with safety-critical situations be improved in demanding maritime operations?

Domain:

Ship (bridges), rig (control rooms)

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Research questions and areas of focus

RQ1: What are the characteristics of sensemaking and resilience in safety-critical situations?

RQ3: What are the characteristics of an HMI that facilitates sensemaking and resilience in safety-critical situations in the maritime domain?

RQ4: What are the characteristics of training methods that promote the development of sensemaking in the future maritime profession?

RQ2: What are the needed human, technological and organizational factors to support sensemaking and resilience in safety-critical situations in the maritime profession?

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Research questions

RQ1: What are the characteristics of sensemaking and resilience in safety-critical situations?

RQ2: What are the needed human, technological and organizational factors to support sensemaking and resilience in safety-critical situations in the maritime profession?

RQ3: What are the characteristics of an HMI that facilitates sensemaking and resilience in safety-critical situations in the maritime domain?

RQ4: What are the characteristics of training methods that promote the development of sensemaking in the future maritime profession?

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Research questions and tasks

RQ1: What are the charact… situations?

RQ2: What are the needed … support sensemaking and … profession?

RQ3: What are the charact… resilience in safety-critical …

RQ4: What are the charact… development of sensemak…

Task 1: Literature review of sensemaking and resilience in safety-critical situations

Task 2: Review and evaluate current requirements regarding HMI and training related to safety-critical systems

Task 3: Identify MTO characteristics that contribute to sensemaking and resilience in an organization

Task 4: How to bridge the gap between new technology and old ideals of work in the maritime profession

Task 5: Develop and evaluate an MTO-based approach that can be used for HMI design aiming to contribute to sensemaking and resilience

Task 6: Develop an MTO-based approach for training and assessment of sensemaking, aimed at situations where trainees use new technology designed to support sensemaking and resilience

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Frontiers of knowledge

- Design of safety critical systems
- Sensemaking and resilience
- Learning and training

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