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DISSERTATION TITLE: Exploring Movement-Based Rhythmic Interaction with Senior Citizens

This thesis describes, discusses, and critically examines how Research through Design was used in an Interaction Design research project to produce design-relevant knowledge. The project focused on exploring and understanding (i) a conceptual idea for movement-based interaction with music, and (ii) how the concept could be designed to promote physical activity and social interaction among senior citizens. Beyond exploring and validating the concept through sketching and prototyping in the lab, different versions of the prototype were used to explore and discuss the idea and interactive experiences with senior citizens and their caretakers. Two field studies were conducted using the prototype in the context of social activity groups for Alzheimer patients. The thesis contributes to the fields of Human-Computer Interaction and Interaction Design research by demonstrating and describing how design and prototyping were integral parts of the research approach, by documenting and discussing the knowledge produced in the process, and by connecting this knowledge to existing theories and knowledge within Interaction Design research.