Prof. Dr. Katja Thoring
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Chair of Integrated Product Design (IPD)

Call for Master Thesis at the Chair of Integrated Product Design (IPD)

SCHRÖDINGER'S ROOM

Designing Spatial Portals for Ambiguous and Observer-Dependent Experiences

Summary

For this Master thesis, you will explore how architectural space can create multiple, ambiguous, or even contradictory experiences depending on the observer, their position, movement, presence, and context. Inspired by the thought experiment of Schrödinger's cat, the project asks whether a space can exist in more than one experiential state—and how entering, observing, or interacting with it might reveal or transform that state.

You will investigate precedents from architecture and art, such as the perceptual environments of **James Turrell** and **Robert Irwin**, **Dan Graham's** reflective pavilions, **Olafur Eliasson's** immersive installations, or **SANAA's** explorations of transparency and spatial ambiguity. Through physical experiments with light, reflection, transparency, sound, views, movement, or other sensory phenomena, you will develop your own approach to manipulating spatial perception. The final design will consist of one or several small, inhabitable **spatial portals**, situated in carefully selected locations on campus, in the city, or in the landscape. Multiple portals may also be connected, allowing presence or environmental conditions in one location to alter the experience of another. The project will be developed through architectural drawings and visualizations as well as physical experimentation, including a full-scale prototype or spatial fragment. The thesis can be conducted individually or by a team of up to three students, with the scope adapted accordingly. The project may optionally be developed for submission to the international **Archcontest "Schrödinger's Room"** architecture competition (Deadline January 25, 2027).

Keywords: Spatial Design, Installation, Perception, Ambiguity, Spatial Experience, Prototyping, Technology-supported Design Research

Prerequisites

You should bring a strong interest in experimental architecture and spatial design, hands-on visualization and modelmaking skills, and a willingness to explore spatial phenomena through physical experimentation. Experience with digital fabrication, interactive technologies, or physical computing is welcome but not required.

Provided Resources

We will provide you with access to our Spatial Experience Lab for experimentation. A small budget may be provided for realizing the full-scale design intervention, depending on the quality and feasibility of the concept. The thesis will be largely self-directed, with a maximum of three personal meetings throughout the thesis period, plus on-demand consultations when needed.

How to Apply

If you are interested in conducting this thesis at our chair, please send an email to **thesis.ipd@ed.tum.de** with subject line **"Master Thesis: Schrödinger's Room".** Please state in your email your preferred starting date, your motivation for the topic, and attach your resume and some portfolio samples. Based on the provided materials we will invite you for a first meeting to discuss further.

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Key References

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SANAA: Yuko Hasegawa (Ed.). (2006). *Kazuyo Sejima + Ryue Nishizawa: SANAA.* Milan: Electa.