Translating Sound

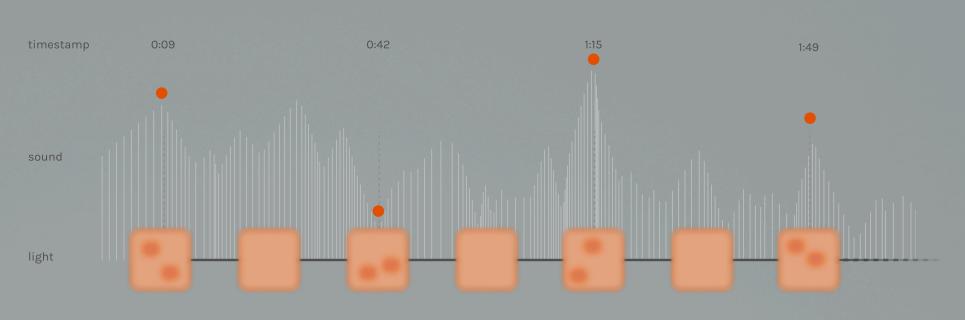
A Responsive Lighting System Complementing Sonic Ambiances in the ICU

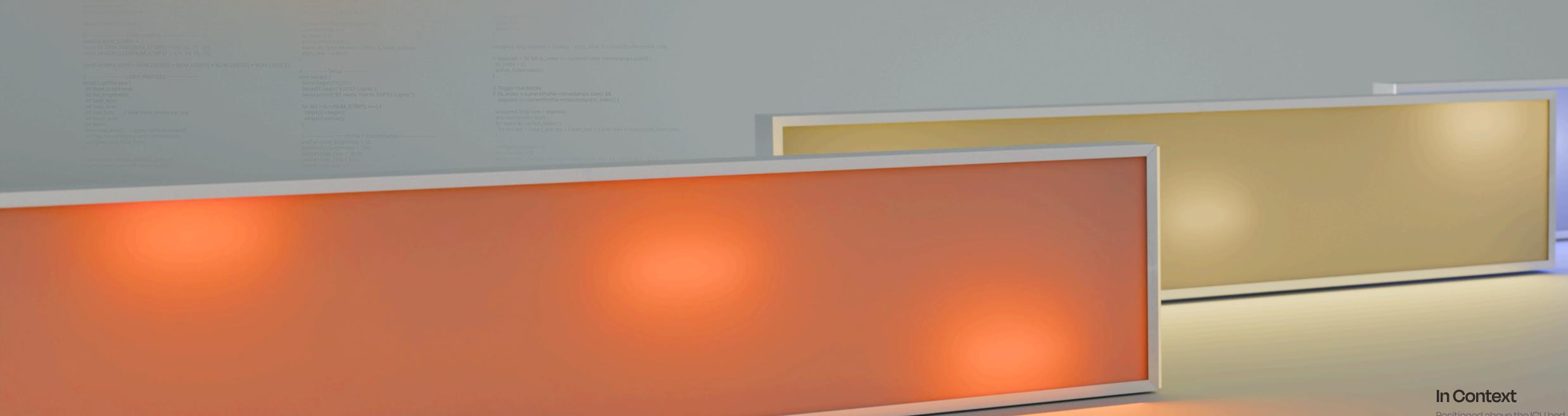
The name Komora is derived from 'Komorebi', the Japanese word describing sunlight filtering softly Similarly, Komora translates sonic events into gentle illuminations, allowing light to shimmer and shift in response to sound.



Soundwaves into Light

Different soundscapes (ranging from natural to man-made environments) have been shown to support patient comfort and recovery. Custom designed python and arduino code detect peaks in sound intensity and translates these into dynamic light cues, allowing the lamp to react and reinforce feelings of calmness or alertness in sync with the sound.



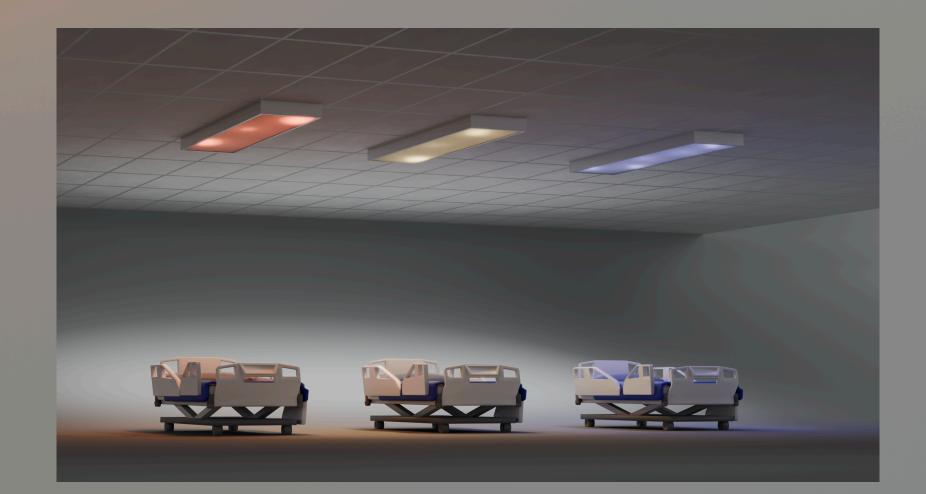




Circadian Rhythm

2:00 AM deep sleep 4:30 AM 7:00 PM LIGHT TEMPERATURE 6:00 PM 6:00 AM 5:00 PM 7:30 AM 8:30 AM 3:30 PM 8:45 AM 2:30 PM 10:00 AM

Positioned above the ICU bed, the fixture integrates into the ceiling to meet strict hygiene standards. It provides gentle, evenly diffused illumination that minimizes glare and visual strain,



Patrick Wetzels

Translating Sound into Light

November 19th 2025

Design for Interaction

Committee

Chair Associate Prof. Dr. Elif Özcan Vieira Mentor Ir. Charl R.G. Smit PDEng Client Dr. Ela Fasllija MFA

