

Institut für Echtzeit Lernsysteme

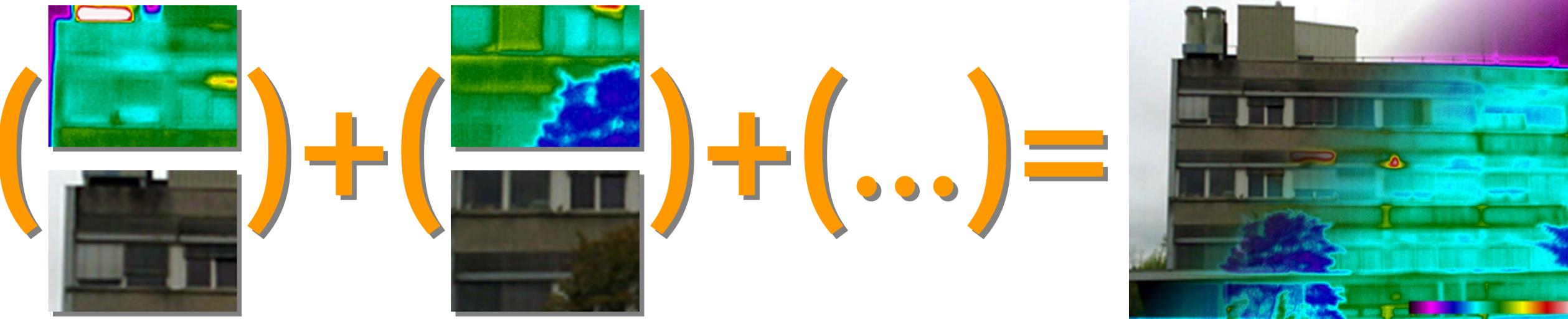


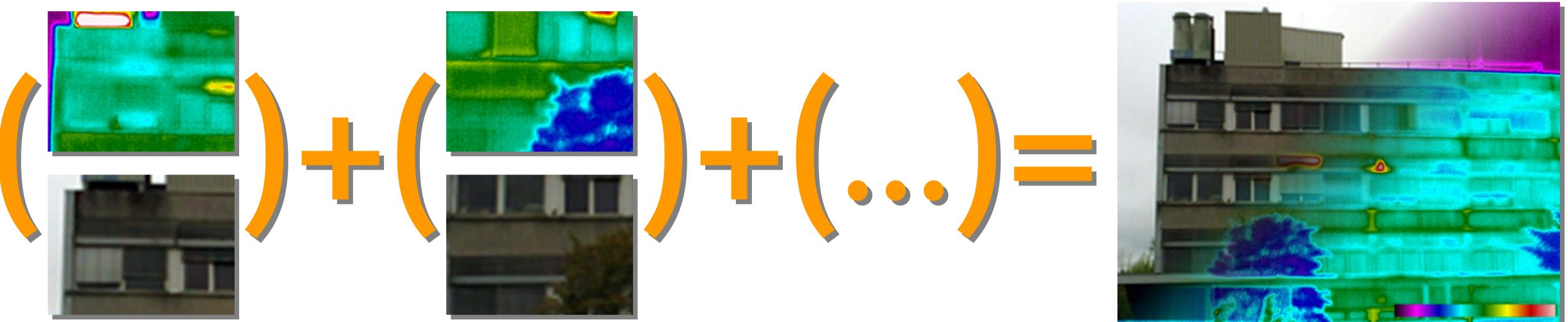
Thermal Imaging

## Project Thermoscan sponsored by RWE AG



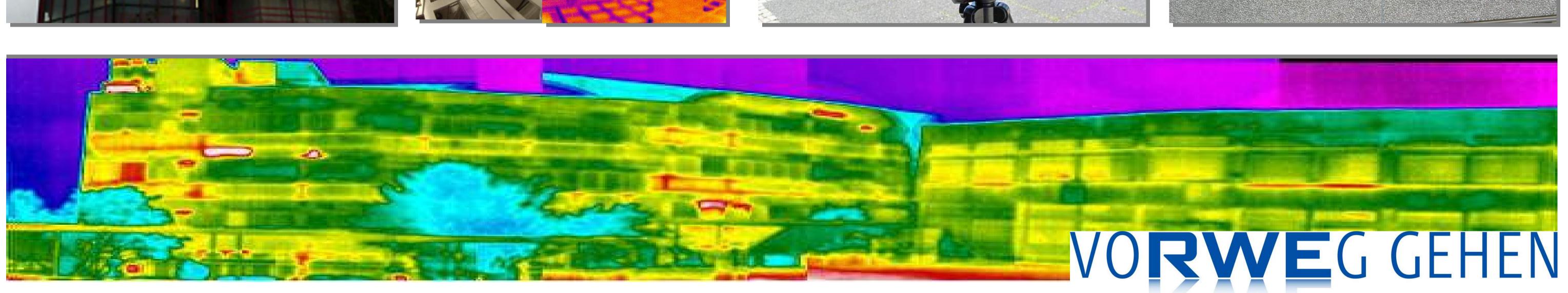
In times of increasing energy costs, the thermal insulation of houses becomes a central and important role. Especially older buildings have a high potential for savings. Thermal bridges like shutter boxes, warped window frames or humid walls cause a loss of heat. To economize thermal energy these points need to be detected. Very suitable for this task are infrared cameras. Those systems create pseudocolor images that reflect the surface temperatures of objects in the scene. One main disadvantage is the poor optical resolution. Even expensive professional units have less than one mega pixel which is low compared against current visual cameras.





To create more detailed images we merge multiple single shots into one high resolution picture. This will be achieved by recording the scene parallel with a thermal and a visual RGB-camera.





Dipl.-Inform. Marc Steven Krämer Prof. Dr.-Ing. Klaus-Dieter Kuhnert Institut für Echtzeit Lernsysteme



Universität Siegen Hölderlinstr. 3, 57076 Siegen www.eti.uni-siegen.de/ezls