

Human-in-the-loop Sensing and Control for Commercial Building Energy Efficiency and Occupant Comfort



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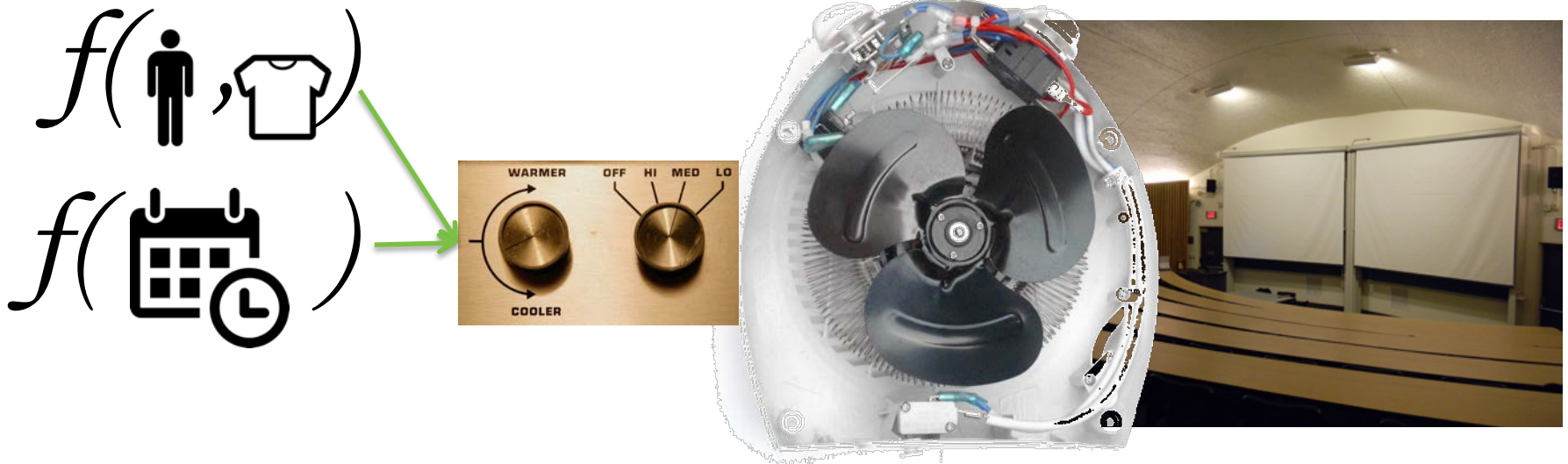
The CMU team brings more than a decade of experience with embedded systems and data analytics applied to building energy efficiency technologies.

Bosch is a global leader in technology innovations with a long history of collaboration with the CMU team and with DOE-funded projects.

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What if we could incorporate room-level occupancy counts and thermal comfort preferences into our building controls?

What if we could do it at a low cost and with high accuracy?



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Advantage, Differentiation, and Impact

- Highly- accurate
- Integrates with existing infrastructure
- Can be leveraged for security/biometrics
- Privacy-preserving
- Can provide 20% energy savings compared to scheduled-based controls

Thank You

Carnegie Mellon University and Bosch RTC
Mario Bergés, Associate Professor