



# EECS

School of Electrical Engineering  
and Computer Science

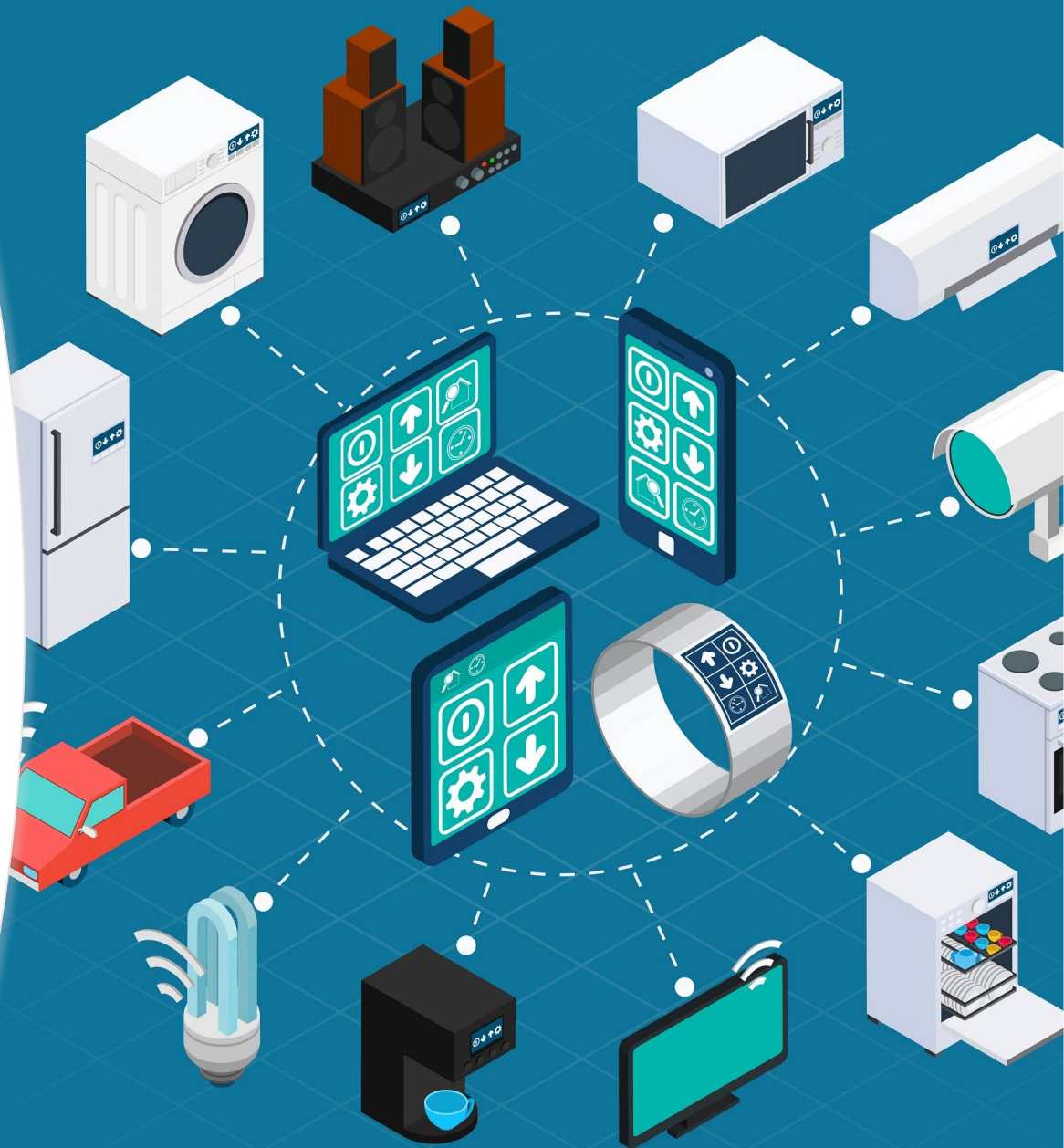
## POWER & THE IOT: SMART HOMES TO SMART GRID

- APOGEE 2020 Summer Camp  
July 20 – 24, 2020
- Dr. Nilanjan Ray Chaudhuri  
Associate Professor



**PennState**  
College of Engineering

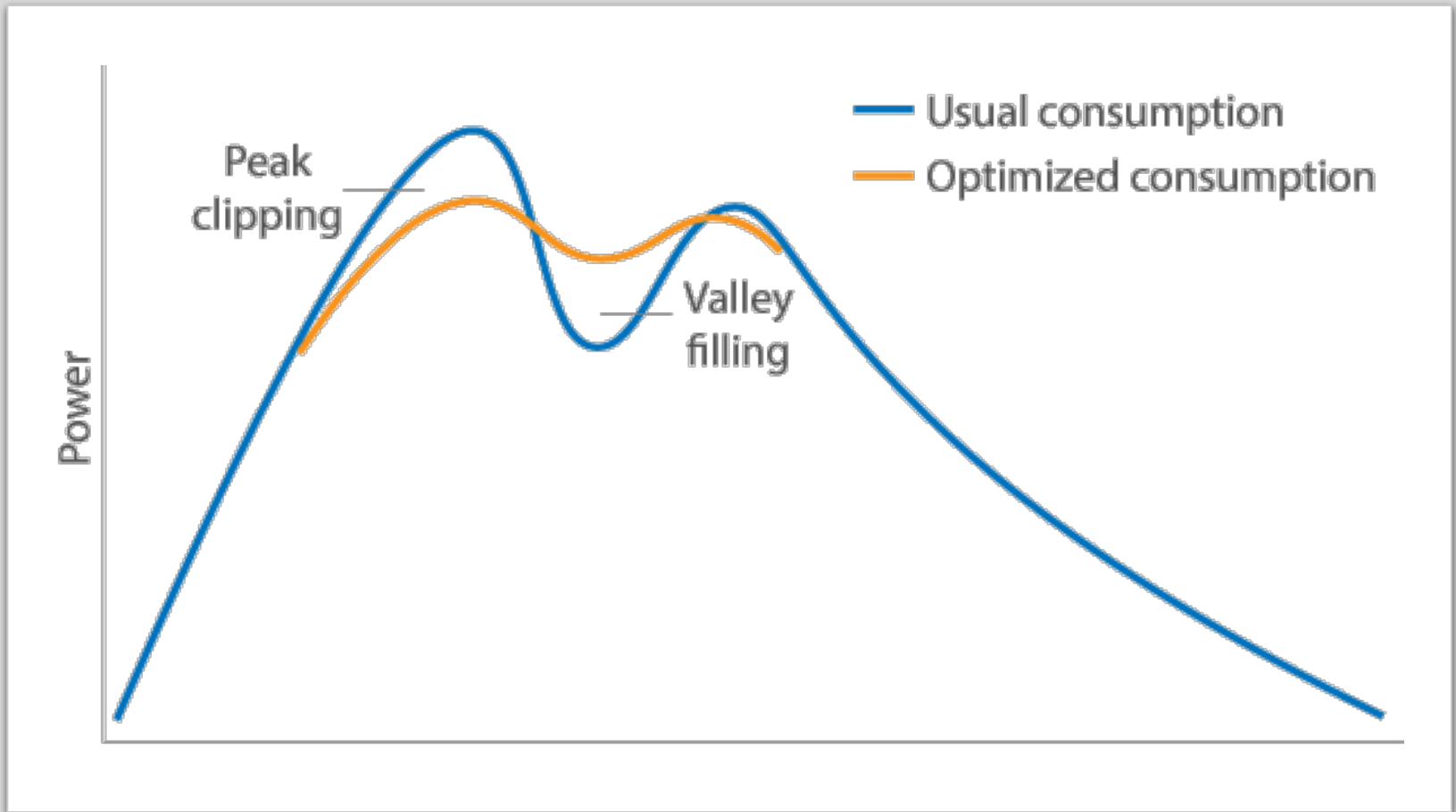
# IoT: Touching Our Lives



INTERNET OF THINGS



# IoT in Smart Home



## Smart Home application in Smart Grid: Demand Response



## Benefits

- Energy savings
- Reduce CO<sub>2</sub> emission
- Reliable smart grid







- (1) Temperature-sensing motor on/off control
- (2) Temperature sensing motor speed modulation
- (3) The above combined with Price signal and other signals

# Smart Air-Conditioning

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Questions

