

# Smart Energy Systems (SmartES) Lab

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Assistant Professor

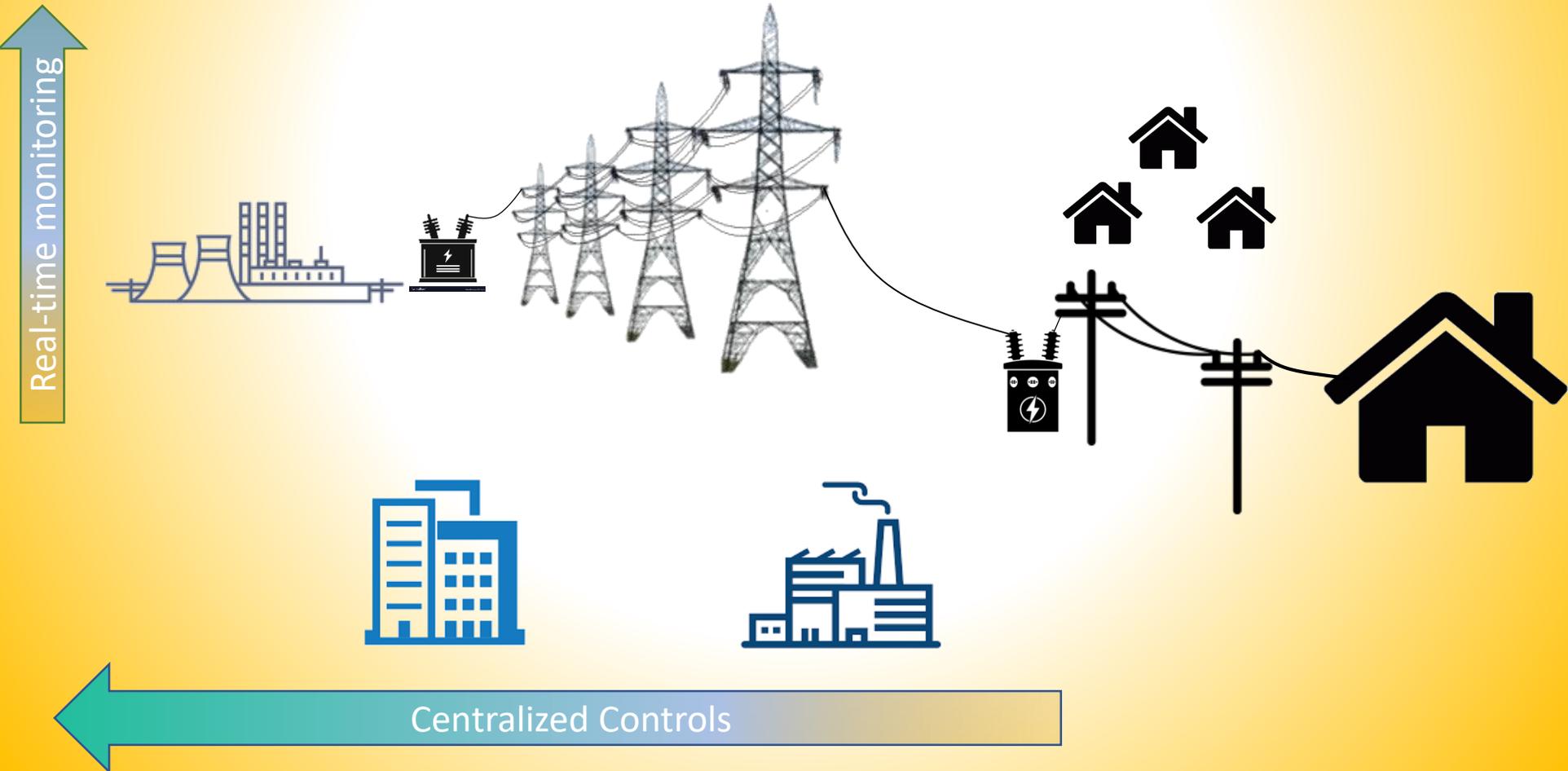
*International Master's Program in Electric Power Engineering (IMEPE)*  
*Department of Electrical Engineering*



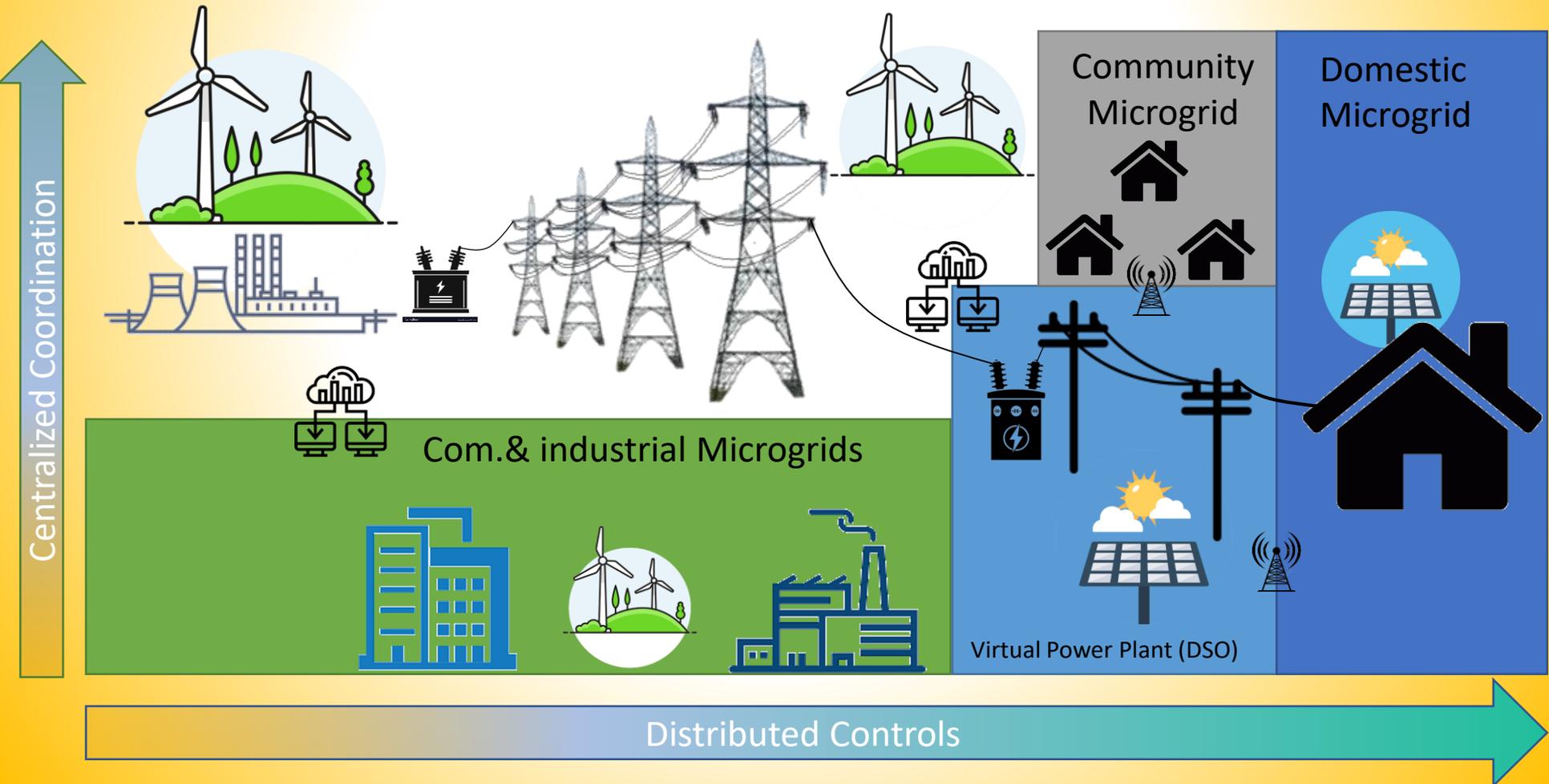
國立中山大學

National Sun Yat-sen University

# Conventional power systems

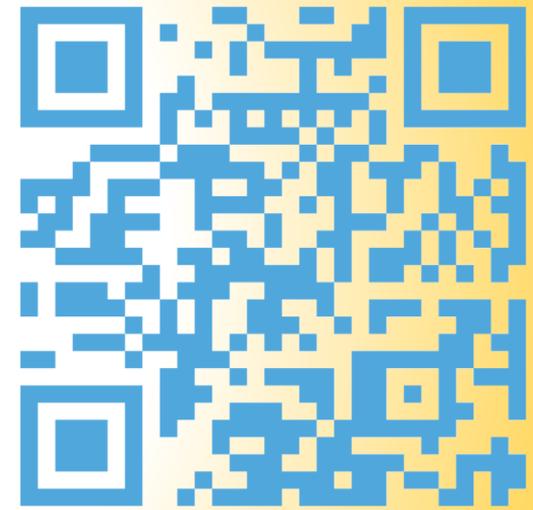


# Modern power systems



# Major Research Areas

- Renewable energy integration issues
  - Transients and dynamic stability
  - Operation and control
  - Planning
- Robust inverter control algorithms
  - Self synchronized systems
- Reliability of power system components
  - Failure mechanisms of (HVDC) converters.
  - Reliability models for SiC MOSFET based high-capacity power converters.



**to learn more...**

Scan the QR-code or visit  
“[https://imepe.nsysu.edu.tw/imepe/media/uploads/poster\\_manaz.pdf](https://imepe.nsysu.edu.tw/imepe/media/uploads/poster_manaz.pdf)”

# Members



*Marco Antonio Rojas  
Rodriguez*

**Research:** Online power system inertia estimation using real-time PMU measurements.



*You Tai Wei (游泰偉)*

**Research:** Design and analysis Electrothermal and Aging(ETnA) model for SiC MOSFET converters.



*Hsu Chin Chen*

**Research:** Transmission system planning to accommodate large scale off-shore Wind Power Generation.



*Meng-Lei Lu (陸孟蕾)*

**Research:** Distribution system state estimation.



*Po-shien Huang (黃柏憲)*

**Research:** Artificial intelligence techniques for real-time inertia estimation in power systems.



*Hong Shang-Ping (洪上評)*

**Research:** SiC MOSFET Reliability Analysis.



*Nina Erlianty*

**Research:** Cost analysis of diesel and solar PV based rural electrification projects in Indonesia.

# Are you excited to know more?

- Visit the Smart Energy Systems Lab located in EC8016-1
- Send an email to [mohdmanaz@mail.ee.nsysu.edu.tw](mailto:mohdmanaz@mail.ee.nsysu.edu.tw)

**Thank You!**



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