

# Renewable energies - introduction

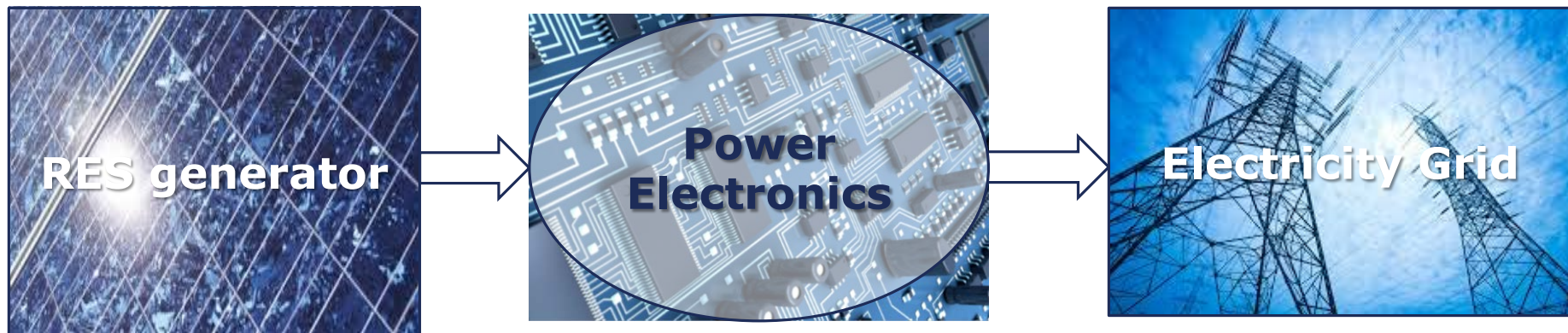
Dr. Juras Ulbikas

**ADVANCED POWER ELECTRONICS IN THE BALTIC SEA REGION  
CONFERENCE**

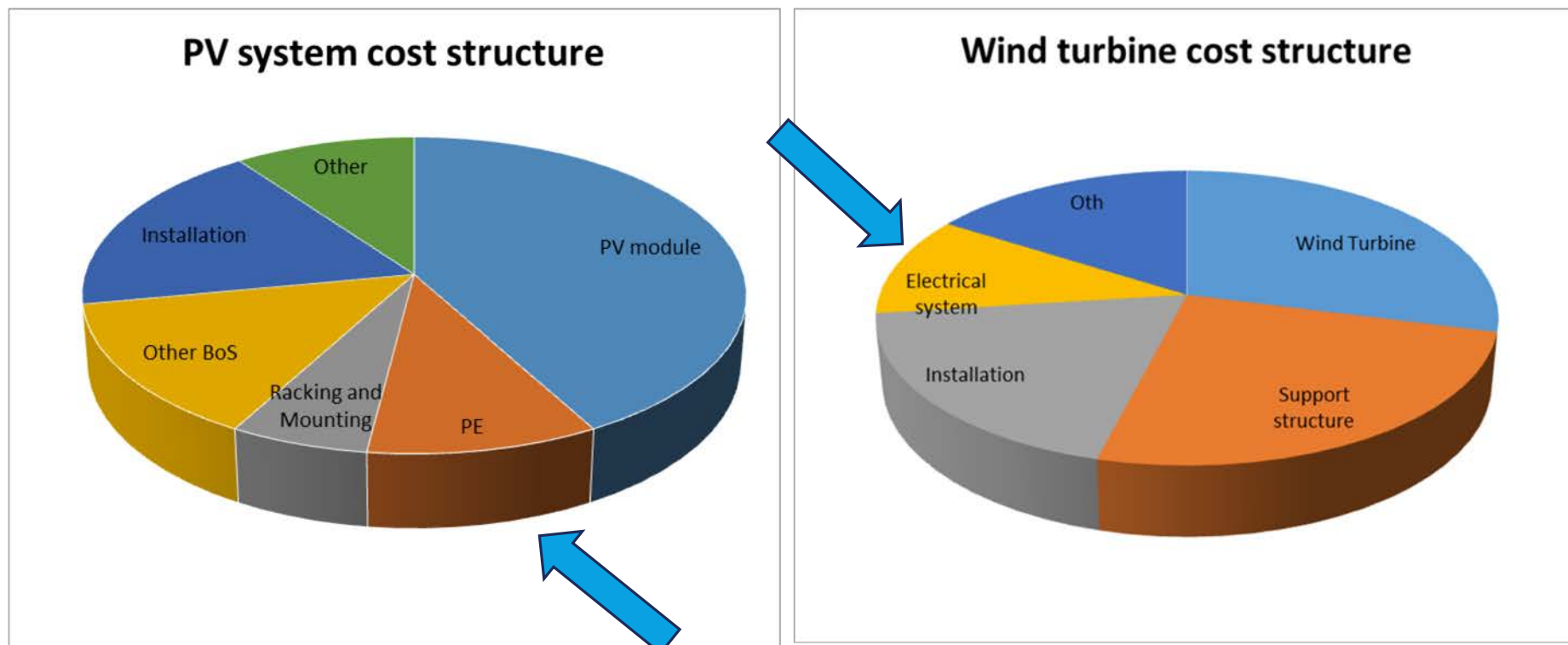
2019 Jan 25

## Power Electronics in RES

- To make compatible RES generator with electricity grid (DC/AC)
- To meet requirements for energy fed into the grid (quality of signal)



# PE in RES cost structure



## Cost savings by PE

- **Cost savings for PE through technological solutions**
  - cheaper implementation of conversion algorithms
- **More efficient way to extract power from the same RES generator**
  - PV case of high achievement: 94% to 96% (97-98% in GreenPE)
  - To work on highest efficiencies in wide power intervals
- **O&M costs savings:**
  - Extended lifecycle
  - Less maintenance



## Network Session:

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- **GreenPE pilot results**
- *Jacek Rabkowski, Warsaw University of Technology*
- *Holger Kapels, Kiel University*
- Pitch talk: **Building integrated photovoltaics**
- *Juras Ulbikas, Applied Research Institute for Prospective Technologies*

**Thank you.**

