

# BEAMS

## Lab presentation



### ■ ULB-BEAMS : Bio, Electro and Mechanical Systems Dpt

- 4 research units, 12 professors, 50 researchers, 9 admin & technical staff
- Electrical Energy
  - electric power systems, smart metering
  - renewable energy (wind, photovoltaics)
  - electrical machines and drives
  - power electronics
  - low-frequency computational electromagnetics
- Micro and Biomedical engineering
- Embedded Electronics
- Qalinca (management and logistics)

Innovation Meeting – 23/06/2015 – p. 1

### Bio, Electro and Mechanical Systems Dpt (BEAMS) Electrical Energy Group

Prof. Jean-Claude Maun, Prof. J. Gyselincx

#### Power systems

- grid, electrical machine, train and power plant protections
- Power Quality analysis
- wide area monitoring, protection and control

#### Smart metering

- mainly domestic appliances

#### Renewables – Distributed generation

##### wind energy and wind turbines

- grid integration, fault tolerance
- different electrical chains (DFIG, ...)

##### photovoltaics & storage

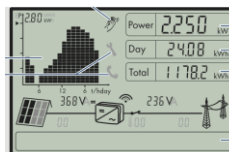
- test environment for PV inverters
- power electronics
- batteries, flywheel

#### Electrical machines and drives

- design, modelling, control
- fault detection and fault tolerance
- dSPACE test benches
- machine types: IM, PMSM, SRM, ...
- wind, electrical vehicles, ...

#### Computational magnetics

- algorithms (Gmsh & GetDP)
- low-frequency applications





## Lab visit



- For your group number: see badge
- Group 1
- Group 2
- Group 3 : networking drink