



ADMITERE DOCTORAT
Sesiunea Septembrie 2022

Domeniul de doctorat: Inginerie Electrica
Conducător de doctorat: Prof dr ing Corneliu Marinescu

TEME (TEMATICĂ) PENTRU CONCURS

TEMA 1: *Microretele domestice hibride utilizand energii regenerabile*

Conţinut / Principalele aspecte abordate

- Surse regenerabile utilizabile in domeniul casnic
- Microretele inteligente
- Consumatorii casnici si incarcarea energetica
- Stocarea Energiei electrice
- Incarcarea bateriilor electrice performante
- Tehnici de comunicatie si control a Microretelelor casnice

Bibliografie recomandată:

1. Marinescu C., et a. *Rețele Hibride cu Surse Regenerabile de Energie. Evolutii moderne,(Hibrid Networks with Renewable Energy Sources)* 2011, Ed Univ Transilvania, ISBN 978 973 -598-049-1
2. [Hatziargyriou, Nikos \(2014\). Microgrids Architectures and Control. John Wiley and Sons Ltd. p. 4. ISBN 978-1-118-72068-4.](#)
3. Eric Tervoa et al.,An economic analysis of residential photovoltaic systems with lithium ion battery storage in the United States, *Renewable and Sustainable Energy Reviews*,94,2018
4. David Bakken editor, *SMARTGRIDS Clouds, Communications, Open Source, and Automation*, CRC Press, 2014.
5. I Serban, Sandra Cespedes, **C.Marinescu**, et al., *Communication requirements in Microgrids: a practical survey*, IEEE Access, DOI 10.1109/ACCESS, 2020, FI 4,08,
6. C. Marinescu, *Design Consideration regarding a Residential Renewable based Microgrid with EV Charging Station capabilities*. *Energies* 2021, Volume 14, Issue 16, 5085

Note /Precondiții / Obs.:
studii: Inginerie Electrica

TEMA 2: *Statii de incarcare domestice pentru Vehiculele Electrice utilizand energii regenerabile*

Conţinut / Principalele aspecte abordate

- Surse regenerabile utilizabile in domeniul casnic
- Statii de incarcare pentru VE
- Vehicule Electrice, VE, urbane
- Stocarea Energiei electrice
- Incarcarea bateriilor electrice performante
- Tehnici de control a incarcarii in Microretele

Bibliografie recomandată:

1. Marinescu C., et a. *Rețele Hibride cu Surse Regenerabile de Energie. Evolutii moderne,(Hibrid Networks with Renewable Energy Sources)* 2011, Ed Univ Transilvania, ISBN 978 973 -598-049-1

2. *Hatziargyriou, Nikos (2014). Microgrids Architectures and Control. John Wiley and Sons Ltd. p. 4. ISBN 978-1-118-72068-4.*

3. Eric Tervo et al., An economic analysis of residential photovoltaic systems with lithium ion battery storage in the United States, *Renewable and Sustainable Energy Reviews*, 94, 2018

4. H.S. Das et al. Electric vehicles standards, charging infrastructure, and impact on grid integration: A technological review, 2020, 120, *Renewable and Sustainable Energy Reviews*

5. C. Marinescu, *Design Consideration regarding a Residential Renewable based Microgrid with EV Charging Station capabilities*. *Energies* 2021, Volume 14, Issue 16, 5085

Note / Precondiții / Obs.: *studii: Inginerie Electrica*

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