



Şcoala Doctorală Interdisciplinară
(SDI)

Domeniul de doctorat:

Inginerie Mecanică

Conducător doctorat:

Prof.em.dr.ing.DHC Ion VIŞA

TEMATICĂ PENTRU CONCURS

TEMA 1: *Terase verzi pentru clădiri cu consum aproape zero din surse convenţionale de energie.*

Principalele aspecte abordate:

- *Influenţa teraselor verzi asupra consumului de energie al clădirii.*
- *Influenţa teraselor verzi asupra funcţionării sistemelor de energii regenerabile.*

Bibliografie recomandată:

1. Visa I., Duta A., Moldovan M., Burduhos B., Neagoie M., Solar Energy Conversion Systems in the Built Environment, Green Energy and Technology, Springer Nature Switzerland AG, 2020
2. Moldovan M., Visa I., Duta A., Future trends for solar energy use in nearly zero energy buildings, Advances in Solar Heating and Cooling, 547-569, Elsevier, 2016

Note /Precondiţii / Obs: *se va adapta /completa/elimina, după caz*

TEMA 2: *Mix energetic alcătuit din pompă de căldură, colectoare solar termice şi sistem de stocare sezonieră a energiei termice pentru clădiri cu consum aproape zero din surse convenţionale de energie*

Principalele aspecte abordate

- *Mixuri energetice bazate pe SER pentru asigurarea energiei termice în mediul construit.*
- *Soluţii de stocare sezonieră a energiei termice obţinute din surse regenerabile de energie.*

Bibliografie recomandată:

1. Visa I., Duta A., Moldovan M., Burduhos B., Neagoie M., Solar Energy Conversion Systems in the Built Environment, Green Energy and Technology, Springer Nature Switzerland AG, 2020
2. Moldovan M., Visa I., Duta A., Future trends for solar energy use in nearly zero energy buildings, Advances in Solar Heating and Cooling, 547-569, Elsevier, 2016
3. Kalogirou Soteris, Solar Energy Engineering, 2nd Edition, Springer, 2013
4. John A. Duffie & William A. Beckman, Solar Engineering of Thermal Processes, 2006

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Transilvania
University
of Brasov

ADMISSION TO DOCTORAL STUDIES

2020-2021

Session September 2020

Interdisciplinary Doctoral School
(SDI)

Field of doctoral studies:

Mechanical Engineering

PhD supervisor:

Prof.em.dr.eng.DHC Ion VIȘA

TOPICS FOR THE ADMISSION TO DOCTORAL STUDIES

TOPIC 1: *Green roofs for nearly zero energy buildings*

Main aspects to be considered

- *The influence of the green roofs on the energy consumption of the building.*
- *The influence of the green roofs on the renewable energy systems.*

Recommended bibliography:

1. Visa I., Duta A., Moldovan M., Burduhos B., Neagoe M., Solar Energy Conversion Systems in the Built Environment, Green Energy and Technology, Springer Nature Switzerland AG, 2020
2. Moldovan M., Visa I., Duta A., Future trends for solar energy use in nearly zero energy buildings, Advances in Solar Heating and Cooling, 547-569, Elsevier, 2016

Prerequisites / Remarks: *se va adapta /completa/elimina, după caz*

TOPIC 2: *Energy mix based on heat pump, solar thermal collectors and seasonal storage system for nearly zero energy buildings.*

Main aspects to be considered

- *Renewable based energy mixes for thermal energy in the built environment.*
- *Seasonal storage solutions for the thermal energy obtained from renewable energy sources*

Recommended bibliography:

1. Visa I., Duta A., Moldovan M., Burduhos B., Neagoe M., Solar Energy Conversion Systems in the Built Environment, Green Energy and Technology, Springer Nature Switzerland AG, 2020
2. Moldovan M., Visa I., Duta A., Future trends for solar energy use in nearly zero energy buildings, Advances in Solar Heating and Cooling, 547-569, Elsevier, 2016
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Prerequisites / Remarks: *se va adapta /completa/elimina, după caz*

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