



ADMITERE DOCTORAT

Sesiunea Septembrie 2023

Domeniul de doctorat: Inginerie electronică, telecomunicații și tehnologii informaționale

Conducător de doctorat: Prof.Dr. Doru URSUTIU (Mebbru corespondent AOSR)

TEME (TEMATICĂ) PENTRU CONCURS

TEMA 1: *Tehnologii noi in monitorizarea starii de sanatate*

Conținut / Principalele aspecte abordate

1. Sisteme IoT (industriale si medicale)
2. Ceasuri inteligente si alte solutii de monitorizare
3. Sisteme de comunicare (tendinte, dezvoltare, aplicatii)
4. Sisteme de alimentare autonome (energy harvesting)

Se pot aborda si alte teme de comun acord (personalizate) discutate cu candidatii inscrisi la concurs.

Bibliografie recomandată:

1. **Chamunorwa, T; Ursutiu, D; (...); Modran, HA., Electronic Educational Laboratory Platform for Students, 18th Annual International Conference of the International-Association-of-Online-Engineering (IAOE) and the Global-Online-Laboratory-Consortium (GOLC) on Remote Engineering and Virtual Instrumentation (REV) - Online Engineering and Society 4.0, 2022 | ONLINE ENGINEERING AND SOCIETY 4.0 298 , pp.311-322**
2. **Ravariu C., E. Manea, Babarada F., Ursutiu D., Mihaiescu D., Smith AM, "Organic Compounds on Integrated Nanostructured Materials for Biomedical Applications" Proceedings of the 15th International Conference on Remote Engineering and Virtual Instrumentation ISSN: 23.67337 million isbn: 978-3-319-95678-7, Publishing Year: 2018**
3. **Neagu, A., Ursutiu, D., Samoila C., Jingles, V - "INTERNET of Things AND ONLINE ENGINEERING ", Editors: Auer, Michael E., Zutin, Danilo G. (eds.) Lecture Notes in Networks and Systems, vol 22. Springer, modularity Applied to SMART HOME ChamNumber of Pages pp. 1062 (pp.56 -67) ISBN 978-3-319-64352-6 Online https://doi.org/10.1007/978-3-319-64352-6_6 DOI Print ISBN 978- 3-319-64351-9 © Springer International Publishing AG Published: 2017**
4. **D. Ursutiu and other New trends on monitoring and diagnosis for health sciences, Chapter: "Preliminary results related to the effects melotherapy BioRadio and**

analysis Using the LabVIEW analyzes" p.95-113 Ed. LAP LAMBERT Academic Publishing, 2015, ISBN: 978 -3-659-77699-1

Note /Preconții / Obs.: se va adapta /completa/elimina, după caz

**TEMA 2: Sisteme Inteligente de monitorizare a starii de confort din incaperi
(posibila colaborare cu Industria)**

Conținut / Principalele aspecte abordate

1. Sisteme si senzori
2. Componente hard si soft reconfigurabile si adaptabile
3. Sisteme de comunicare si alimentare

Se pot aborda si alte teme de comun acord (personalizate) discutate cu candidatii inscrisi la concurs.

Bibliografie recomandată:

1. Chamunorwa, T; Ursutiu, D; (...); Modran, HA., Electronic Educational Laboratory Platform for Students, 18th Annual International Conference of the International-Association-of-Online-Engineering (IAOE) and the Global-Online-Laboratory-Consortium (GOLC) on Remote Engineering and Virtual Instrumentation (REV) - Online Engineering and Society 4.0, 2022 | ONLINE ENGINEERING AND SOCIETY 4.0 298 , pp.311-322
2. Neagu, A., Ursutiu, D., Samoila C., Jingles, V - "INTERNET of Things AND ONLINE ENGINEERING ", Editors: Auer, Michael E., Zutin, Danilo G. (eds.) Lecture Notes in Networks and Systems, vol 22. Springer, modularity Applied to SMART HOME ChamNumber of Pages pp. 1062 (pp.56 -67) ISBN 978-3-319-64352-6 Online https://doi.org/10.1007/978-3-319-64352-6_6 DOI Print ISBN 978- 3-319-64351-9 © Springer International Publishing AG Published: 2017
3. Web link: <https://www.hindawi.com/journals/js/2020/8749764> „Development of an IoT-Based Indoor Air Quality Monitoring Platform”
4. Web link: <https://www.unep.org/data-resources>
5. Web link:
https://www.researchgate.net/publication/263970505_Air_Quality_Monitoring

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TEMA 3: Sisteme hard reconfigurabile soft (case inteligente)

Conținut / Principalele aspecte abordate

1. Sisteme complexe hard - reconfigurabile soft
 - Senzori inteligenți
 - Sisteme de instrumentație reconfigurabile

- **Sisteme noi de măsurare și control în "cloud"**

2. Sisteme IoT

- **Platforme universale de comunicare**
- **Componente hard și soft**
- **Interoperabilitate și securitate**

Se pot aborda și alte teme de comun acord (personalizate) discutate cu candidații înscriși la concurs.

Bibliografie recomandată:

1. Chamunorwa, T; Modran, HA; (...); Ursutiu.D, Hedesiu, H., Reconfigurable Wireless Sensor Node Remote Laboratory Platform with Cloud Connectivity, , Oct 2021, SENSORS 21 (19)
2. Palade, C; Lepadatu, AM; Ursutiu. D (...); Samoila, C., Nanocrystallized Ge-Rich SiGe-HfO₂ Highly Photosensitive in Short-Wave Infrared, Nov 2021 MATERIALS 14 (22)
3. Ursutiu, D., Samoila C., Jinga, V., Alto, F - "The Future of Reconfigurable hardware-software" in ICL-2016 Conference 21-23 Sept.2016 - Belfast North Ireland Published in "Advances in Intelligent Systems and Computing" - Springer ISSN: 2194-5357, Editors: Michael E. Auer, David Guralnick, James Uhomobhi Book Title "Interactive Collaborative Learning" eBook ISBN 978-3-319-50337-0, Softcover ISBN 978-3-319-50336- 3 Series Volume 544
4. Ursutiu D.Neagu A. Samoila C., LabSocket-E "and myRIO in LabVIEW Real-Time / Embedded Systems Student Teaching and Training", Proceedings of the 15th International Conference on Remote Engineering and Virtual Instrumentation ISSN: 23.67337 million isbn: 978-3 -319-95677-0 An appearance: 2018
5. Neagu, A., Ursutiu, D., Samoila C., Jingles, V - "INTERNET of Things AND ONLINE ENGINEERING " Editors: Auer, Michael E., Zutin, Danilo G. (eds.) Lecture Notes in Networks and Systems, vol 22. Springer, modularity Applied to SMART HOME ChamNumber of Pages pp. 1062 (pp.56 -67) ISBN 978-3-319-64352-6 Online https://doi.org/10.1007/978-3-319-64352-6_6 DOI Print ISBN 978- 3-319-64351-9 © Springer International Publishing AG Published: 2017

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Conducător de doctorat,

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Membru Corespondent AOSR

Semnătură

Coordonatorul domeniului de doctorat,

Prof. dr. Mihai Ivanovici

Semnătură