

Lista de lucrări

a) Lista celor maximum 10 lucrări considerate de candidat a fi cele mai relevante pentru domeniul disciplinelor postului pentru care candidează, care sunt incluse în format electronic în dosar și care se pot regăsi și în celelalte categorii de lucrări;

1. 09/2020 – Date: Associate Lecturer

Agile software development, Data Acquisition and Processing, FLCD and Cryptography at Babes Bolyai University, Computer Science Department Cluj-Napoca, Romania and Engineering Department, Resita, Romania.

2. 2019 – 5/2019: Lecturer

Microfluidic applications using MEMS devices at Fac. of Elects. and Telecoms., Uni. of Eng. and Tech., VNU–HN, VN.

3. 2014 – 2018: Researcher

Design, fabricate, and package SAW devices on chip for liquid applications, TUDELFT, NL.

4. 2011 – 2014: Researcher, assistant lecturer

Research: FEM modeling and simulation for the optimized SAW structures, funded by the project “Liquid sensor system based on a SAW structure for smart inkjethead” (NAFOSTED’s FUNDING), and Teaching: Digital Signal Processing at UET, VNU-HANOI.

5. 2010: Intership

SCTP using fountain code (C/C++) in heterogeneous multi-homing networks, GIST, Korea

b) teza sau tezele de doctorat ;

Surface acoustic mode Aluminum Nitride transducer for micro-size liquid sensing applications

c) brevete de invenție și alte titluri de proprietate industrială;

d) cărți și capitole în cărți;

e) articole/studii in extenso, publicate în reviste din fluxul științific internațional principal;

1. Quang Loc Do, Thu Hang Nguyen, Ngoc Anh Nguyen Thi, **Thu Hang Bui**, Thanh Tung Bui, and Duc Trinh Chu, “Micropillar-based microfluidic chip for trapping, long-term culture of single cells”, *Microfluidics and Nanofluidics*, 2024.
2. Mai Chi Nguyen; Hoang Trung Nguyen; Y-Van Tran Thi; Ngoc Trung Vu; **Thu Hang Bui**; Duc Trinh Chu; Thanh Tung Bui; Chun-Ping Jen; Quang Loc Do, “Numerical analysis of dielectrophoresis-based microfluidic chip with a facing-electrode design for cell separation”, no. 1, p. 29-40, *Journal of Biosystems Engineering*, 2024.
3. NVPhu, HB Anh, TT Hang, NT Hang, **BT Hang**, and DQ Loc, “*Numerical calculation and analysis of a novel complex impedance sensing approach for in-flow droplet detection utilizing the C4D technique*”, *Modelling and Simulation in Materials Science and Engineering*, 8/2023
4. Thu-Hang Nguyen, Mai Chi Nguyen; Hoang Trung Nguyen; Y-Van Tran Thi; Ngoc Trung Vu; **Thu Hang Bui**; Duc Trinh Chu; Thanh Tung Bui; Chun-Ping Jen; Quang Loc Do, “Cancer Cell Separation by Using Dielectrophoresis-based Microfluidic Chip with a Facing-Electrode Design” (submitted).
5. Bao-Anh Hoang, Van-Anh Bui, Kien Do Trung, **Hang Bui Thu**, Trinh Chu Duc, Tung Thanh Bui & Loc Do Quang, “*Design and analysis of a novel complex impedance sensing approach for*

fluidic flow detection utilizing the C4D technique", Modelling and Simulation in Materials Science and Engineering, 2023

6. Bao-Anh Hoang, Van-Anh Bui, Kien Do Trung, **Hang Bui Thu**, Trinh Chu Duc, Tung Thanh Bui & Loc Do Quang, "Development of a wireless passive capacitively coupled contactless conductivity detection (WPC4D) for fluidic flow detection utilizing 3D printing and PCB technologies", Instrumentation Science & Technology, 2/2023. DOI: <https://doi.org/10.1080/10739149.2023.2182791>.
7. Bao-Anh Hoang, Hang Tran Thanh, Thu-Hang Nguyen, Thao Pham Ngoc, **Hang Bui Thu**, Nam Nguyen Hoang, Tung Thanh Bui, Trinh Chu Duc, Loc Do Quang, "Design and Numerical Study on a Microfluidic System for Circulating Tumor Cells Separation From Whole Blood Using Magnetophoresis and Dielectrophoresis Techniques", Biochemical Engineering Journal, 7/2022. DOI: <https://doi.org/10.1016/j.bej.2022.108551>
8. **ThuHang Bui**, Van Nguyen, Sten Vollebregt, Bruno Morana, Henk van Zeijl, Trinh Chu Duc, and Pasqualina M. Sarro, "Effect of Droplet Shrinking on Surface Acoustic Wave Response in Microfluidic Applications", Applied Surface Science, 2017, DOI: <https://doi.org/10.1016/j.apsusc.2017.07.140>.
9. **ThuHang Bui**, Bruno Morana, Atef B. Akhnoukh, Trinh Chu Duc, and Pasqualina M. Sarro, "Liquid Identification by a Micro-electro-mechanical Interdigital Transducer", Analyst, 2017, DOI: <http://dx.doi.org/10.1039/c6an01804a>.
10. **ThuHang Bui**, Bruno Morana, Tom Scholtes, Trinh Chu Duc, and Pasqualina M. Sarro "A mixing surface acoustic wave device for liquid sensing applications: Design, simulation, and analysis", Journal of Applied Physics, 120, 074504 (2016), DOI: <http://dx.doi.org/10.1063/1.4961214>.
11. **Thu Hang Bui**, Tung Bui Duc and Trinh Chu Duc, "Microfluidic Injector Simulation with F-SAW Sensor for 3D Integration", IEEE Trans. on Instrumentation & Measurement, Vol. 64, No. 4, pp. 849 - 856, Apr. 2015. DOI: 10.1109/TIM.2014.2366975, ISSN: 0018-9456.
12. **Thu Hang Bui**, Tung Bui Duc and Trinh Chu Duc, "An optimization of IDTs for surface acoustic wave sensor", Int. J. Nanotechnology, 2015 Vol.12, No.5/6/7, pp.485 – 495, ISBN: 1475-7435.
13. **Bui Thu Hang**, Tran Duc Tan and Chu Duc Trinh, "Three-axis piezoresistive accelerometer with adjustable axial resolutions", Vietnam Journal of Mechanics, ISSN: 0866 7136, vol. 34, no. 1, pp. 45-54, 2012.
14. **Bui Thu Hang**, Bui Duc Tung, Nguyen Tien Dat and Chu Duc Trinh, "Attenuation Coefficient for Surface Acoustic Waves in Fluid Region", Vietnam Journal of Mechanics, ISSN: 0866 7136, vol. 34, no. 4, pp. 225-236, 2012.

f) publicații in extenso, apărute în lucrări ale principalelor conferințe internaționale de specialitate;

1. Horea-Andrian Grebla, Vasile Catalin Rusu, Gilbert-Rainer Gillich and **ThuHang Bui**, "Assessment of cracks in beams using changes in the measured frequencies and Particle Swarm Optimization", Vibroengineering Procedia, 20/10/2023 <https://doi.org/10.21595/vp.2023.23684>
2. Hang Nguyen Thu, Y-Van Tran Thi, **Hang Bui Thu**, Ha Tran Thi Thuy, Tung Bui Thanh and Loc Do Quang, "A combination of dielectrophoresis and magnetophoresis for microfluidic separation of circulating tumor cells from whole blood", ICERA2022 (5th International Conference on Engineering and Research Application).

3. **ThuHang Bui**, An Tran, Bruno Morana, Jia Wei, Trinh Chu Duc, Pasqualina M. Sarro, “*Effect of the Interruption of the Propagation Path on the Response of Surface Acoustic Wave Transducers*”, IEEE-Sensors2016, USA, Oct 30 – Nov 2, pp. 745-747.
4. **ThuHang Bui**, Bruno Morana, Trinh Chu Duc and Pasqualina M. Sarro, “*A novel mixing surface acoustic wave device for liquid sensing applications*”, 2016 IEEE 29th International Conference on Micro Electro Mechanical Systems (IEEE MEMS), China, ISBN: 978-1-5090-1973-1/16.
5. **ThuHang Bui**, Bruno Morana, An Tran, Tom Scholtes, Trinh Chu Duc and Pasqualina M. Sarro, “*SAW device for liquid vaporization rate and remaining molecule sensing*”, IEEE-Sensors2015, Korea, Nov. 1-4, ISBN: 978-1-4799-8203-5/15.
6. **Hang Bui Thu**, Tung Bui Duc and Trinh Chu Duc, Lina Sarro, “*Associated IDTs in Surface Acoustic Wave Devices for Closed-loop Control Inkjet System*”, IEEE-Sensors2014, Spanish, Nov. 3-5, pp. 1936-1939, ISBN: 978-1-4799-0162-3/14.
7. Tung Bui Duc, Nam Pham Hoai, **Hang Bui Thu**, Trinh Chu Duc, “*Effect of the focused surface acoustic wave devices on the microfluidic channel*”, Proceedings of ICEMA 2014, pp.221-225.
8. **Hang Bui Thu** and Trinh Chu Duc, “*Microfluidic Injector Simulation with SAW Sensor for 3D Integration*”, IEEE-Sensors Applications Symposium 2014, Queenstown, New Zealand, February 18-20, pp. 213-218, ISBN: 978-1-4799-2179-9/14.
9. **ThuHang Bui**, Trinh Chu Duc, “*Focused surface acoustic wave devices for pressure sensing at inkjet nozzle*”, ISOME2014 symposium, Tokyo, Japan.
10. **Hang Bui Thu**, Tung Bui Duc and Trinh Chu Duc, “*An optimization of IDTs for surface acoustic wave sensor*”, Proceedings of IWNA 2013, November 14-16, 2013, Vung Tau, Vietnam, pp. 159-162.
11. **Hang Bui Thu** and Trinh Chu Duc, “*Multilayer SAW device for flow rate sensing in a microfluidic channel*”, IEEE-Sensors2013, Maryland, USA, November 3-6, pp. 487-490, ISBN: 978-1-4673-4642-9/13.
12. **Thu-Hang Bui**, Dat Nguyen Tien, Tung Bui Duc and Trinh Chu Duc, “*3-D Finite Element Modeling of SAW sensing system for liquids*”, IEEE/ASME Int. Conf. on Advanced Intelligent Mechatronics 2012, Kaohsiung, Taiwan, July 11-14, pp. 782 – 787, ISSN: 2159-6247, Print ISBN: 978-1-4673-2575-2.
13. Tung Bui Duc, **Thu-Hang Bui**, Dat Nguyen Tien and Trinh Chu Duc, “*R-SAW Analysis on Single-Crystal AlN Substrate for Liquid Sensors*”, Proceedings of ICEMA 2012, August 16-17, 2012, Hanoi, ISBN: 978-604-913-097-7, pp. 13-18.

g) alte lucrări și contribuții științifice sau, după caz, din domeniul creației artistice.

1. **Thu-Hang Bui**, Trinh Chu Duc, “*Focused surface acoustic wave devices for pressure sensing at inkjet nozzle*”, 8th International Symposium on Organic Molecular Electronics (ISOME 2014), Japan

List of works

a) The list of a maximum of 10 works considered by the candidate to be the most relevant for the field of disciplines of the position for which they are applying, which are included in electronic format in the file and which can be you can also find it in the other categories of works;

1. 09/2020 – Date: Associate Lecturer

Agile software development, Data Acquisition and Processing, FLC and Cryptography at Babes Bolyai University, Computer Science Department Cluj-Napoca, Romania and Engineering Department, Resita, Romania.

2. 2019 – 5/2019: Lecturer

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5. 2010: Internship

SCTP using fountain code (C/C++) in heterogeneous multi-homing networks, GIST, Korea

b) doctoral thesis or theses;

Surface acoustic mode Aluminum Nitride transducer for micro-size liquid sensing applications

c) patents and other industrial property titles;

d) books and chapters in books;

e) articles/studies in extenso, published in magazines from the main international scientific stream;

1. Quang Loc Do, Thu Hang Nguyen, Ngoc Anh Nguyen Thi, **Thu Hang Bui**, Thanh Tung Bui, and Duc Trinh Chu, “Micropillar-based microfluidic chip for trapping, long-term culture of single cells”, *Microfluidics and Nanofluidics*, 2024.
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f) publications in extenso, appearing in papers of the main international specialized conferences;

1. Horea-Andrian Grebla, Vasile Catalin Rusu, Gilbert-Rainer Gillich and **ThuHang Bui**, "Assessment of cracks in beams using changes in the measured frequencies and Particle Swarm Optimization", Vibroengineering Procedia, 20/10/2023 <https://doi.org/10.21595/vp.2023.23684>
2. Hang Nguyen Thu, Y-Van Tran Thi, **Hang Bui Thu**, Ha Tran Thi Thuy, Tung Bui Thanh and Loc Do Quang, "A combination of dielectrophoresis and magnetophoresis for microfluidic

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g) other scientific works and contributions or, as the case may be, from the field of artistic creation.

1. **Thu-Hang Bui**, Trinh Chu Duc, “*Focused surface acoustic wave devices for pressure sensing at inkjet nozzle*”, 8th International Symposium on Organic Molecular Electronics (ISOME 2014), Japan