



## Dumitru-Daniel Bonciog

### WORK EXPERIENCE

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#### **Research and Teaching Assistant**

*Politehnica University Timișoara* [ 09/2019 – Current ]

City: Timisoara

Country: Romania

Politehnica University Timisoara, Faculty of Electronics, Telecommunications and Information Technologies, Department of Measurements and Optical Electronics:

- Research and teaching activities with 1st year students – EtcTI (Electrical and Electronic Measurements discipline);
- Sustaining laboratory with 2nd year students Computers, CTI (Principles, Techniques and Measurement Devices discipline);
- Sustaining laboratory activities with 2nd year students ETcTI (Architecture of Computer Networks discipline);
- Sustaining laboratory/ seminar with 3rd year students, ETcTI (Electronic Measuring Devices discipline);
- Sustaining laboratory and seminar with 1st year Computers, CTI (Electronic Measuring Devices discipline);
- Demonstrated commitment to academic research by publishing articles in international conferences/ journals.

#### **Team Leader for Hardware Applications in PE**

*Vitesco Technologies Engineering Romania S.R.L.* [ 07/2023 – Current ]

City: Timisoara

Country: Romania

#### **Senior Advanced Hardware Engineer**

*Honeywell Elster Romania S.R.L.* [ 07/2022 – 07/2023 ]

City: Timișoara

Country: Romania

My main activities as Senior Advanced Hardware Engineer at Honeywell HBT Security:

- Coordinated a team of 4 members, overseeing their work and actively participating in technical activities;
- Planned and executed various project subtasks, including designing and testing phases, ensuring timely completion;
- Assisted in product and process certification to ensure customer acceptance and compliance with industry standards;
- Played a key role in defining requirements for the next generation of products, leveraging my expertise and industry knowledge;
- Collaborated closely with other engineers, technicians, and associates, providing guidance, and fostering a collaborative environment to ensure project and product compliance;
- Engaged in regular consultations with vendors and suppliers, ensuring their adherence to product and project specifications;
- Communicated any incidents of non-compliance and the results of internal project audits to relevant stakeholders, ensuring transparency and prompt resolution;
- Established and followed methodologies for both new and existing concepts, ensuring consistency and efficiency in project execution;
- Leveraged advanced electrical engineering knowledge and principles to identify opportunities and propose technical improvements;

- Actively contributed to advancing projects by suggesting enhancements based on my expertise and thorough understanding of the field.

## **Senior Hardware Engineer**

**Honeywell Elster Romania S.R.L.** [ 07/2019 – 07/2022 ]

**City:** Timișoara

**Country:** Romania

- Contributed to designing and developing hardware products within the company's division (Security Value Engineering, Component Engineering, and Sustaining);
- Generated innovative ideas and implemented/validated them to improve functionality and reduce costs;
- Proactively identified opportunities to reduce Bill of Materials (BOM) and labor costs for existing products;
- Coordinated teams across different parts of the world for specific factory projects, ensuring seamless collaboration and efficient project management;
- Negotiated with component suppliers/manufacturers to obtain best offers on components and leverage new technologies;
- Validated and integrated new alternative component manufacturers into the Honeywell component list;
- Ensured alignment of manufacturers with company requirements for Security Division products, including certifications such as UL, RoHS, VDS, REACH, and more;
- Handled sustaining tasks on factory issues - End of Life, price changes, shortages, other supply chain challenges;
- Effectively communicated the development status/ each component to Honeywell's product development teams;
- Actively participated in brainstorming sessions and Business Alignment Events to drive cost reduction initiatives;
- Analyzed systems data to make informed changes to the hardware configuration, optimizing performance and functionality;
- Collaborated closely with global cross-functional teams, including regulatory, R&D, sourcing, manufacturing, and product engineers;
- Actively promoted the company's business within the University, developing strategies, and increasing the company's visibility among students and faculty through initiatives like Career Days, training programs, Honeywell's faculty laboratory, and more.

## **Hardware Engineer**

**Continental Automotive S.R.L.** [ 05/2018 – 06/2019 ]

**City:** Timișoara

**Country:** Romania

- Actively participated in designing and developing hardware products within the company's division (Interior Body and Security);
- Conducted thorough hardware testing product both individually and in tandem with external computer systems;
- Worked closely with various test equipment such as oscilloscopes, function generators, power supplies, multimeters;
- Analyzed system data to make informed changes to hardware configuration, optimizing its performance and functionality;
- Completed comprehensive functionality and performance tests on final product, ensuring its quality and reliability;
- Generated specifications and prepared detailed test reports to document the hardware's characteristics and performance;
- Collaborated closely with software developers to ensure the operation and integration of the hardware product for its intended purpose.

## **Student Internship**

**Continental Automotive S.R.L.** [ 08/2017 – 04/2018 ]

**City:** Timișoara

**Country:** Romania

- Writing the bachelor degree project with the title "Sistem modular de testare automată pentru unitatea electronică de comandă" (Modular automatic test system for the electronic control unit) to create a system to

automatize and monitor the electronic tests for BCM (Body Control Module) inputs and outputs, guided by the internal hardware engineer within the company:

- created the system architecture and selected suitable components for the test system;
- conducted worst-case analysis and performed calculations to ensure the system's reliability and performance;
- developed six electronic schematics and corresponding layout using the EAGLE program;
- established Hardware-Software Interface;
- contributed to the system's technological, thermal, and mechanical design aspects, ensuring its functionality and suitability for the intended purpose;
- participated in the assembly and testing processes of the modules, ensuring they meet the required standards and specifications;
- Throughout the internship, I gained valuable experience in system design, analysis, schematic development, hardware-software integration, and module testing.

### **Summer Internship**

**Continental Automotive S.R.L.** [ 06/2017 – 09/2017 ]

City: Timișoara

Country: Romania

### **Tester of electronical devices**

**AEM S.A.** [ 05/2016 – 05/2017 ]

City: Timișoara

Country: Romania

## **EDUCATION AND TRAINING**

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### **PhD university studies**

**Organizing Institution of Doctoral Studies, IOSUD-UPT,** [ 10/2020 – Current ]

Address: 300226 Timisoara (Romania)

Field(s) of study: PhD

PhD student at IOSUD - Politehnica University of Timișoara, Doctoral School of Engineering Studies, PhD in Electronic Engineering, Telecommunications and Information Technology, under the scientific guidance of prof. Univ. Dr. Eng. Lascu Mihaela-Ruxandra; thesis title: "Dispozitiv experimental prevăzut cu sistem de analiză computerizată de imagini biomedicale pentru obținerea biomatricilor cardiace".

### **Psycho-pedagogical Training Program Level 2 – Postgraduate**

**Craiova University** [ 03/2023 – 06/2023 ]

City: Craiova

Country: Romania

### **Psycho-pedagogical Training Program Level 1 – Postgraduate,**

**Craiova University** [ 10/2022 – 02/2023 ]

City: Craiova

Country: Romania

### **Biomedical Electronics - Master's degree**

**Faculty of Electronics, Telecommunications and Information Technologies** [ 08/2018 – 06/2020 ]

City: Timișoara

Country: Romania

Field(s) of study: Biomedical Electronics

### **Engineer**

**Faculty of Electronics, Telecommunications and Information Technologies** [ 08/2014 – 06/2018 ]

City: Timișoara

Country: Romania

Field(s) of study: Applied Electronics

### **Tehnician in economic activities**

**National Economic College "Theodor Costescu" [ 09/2010 – 05/2014 ]**

City: Drobeta Turnu Severin

Country: Romania

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**Military College "Mihai Viteazul" [ 08/2010 – 09/2010 ]**

City: Alba Iulia

Country: Romania

### **LANGUAGE SKILLS**

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Mother tongue(s): **Romanian**

#### **Other language(s):**

##### **English**

**LISTENING B1 READING B1 WRITING B1**

**SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2**

##### **French**

**LISTENING A2 READING A2 WRITING A2**

**SPOKEN PRODUCTION A2 SPOKEN INTERACTION A2**

*Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user*

### **DIGITAL SKILLS**

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- a good command of the suite programs LTspice, MathCad, PCB CAM Tool, Matlab, Zuken, PADSLogic; / - using the Windows operating system; / - a good command of the Microsoft Office package; / - good knowledge of EAGLE (PCB Design Software) program used for the bachelor's degree project;

### **PUBLICATIONS**

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#### **Articles:**

**Bonciog, D. D.,** Ordodi, V. L., Lascu, M. R., & Mățiu-lovan, L. (2023, June). Automation of Decellularization Process Using Artificial Neural Networks. In *2023 17th International Conference on Engineering of Modern Electric Systems (EMES)* (pp. 1-4). IEEE.

**Bonciog, D. D.,** Lascu, M. R., Mățiu-lovan, L., & Ordodi, V. L. (2023). Automation and Optimization of Rat Heart Decellularization Using a Vibrating Fluid Column. *Sensors*, 23(8), 4045.

**D. D. Bonciog,** V. L. Ordodi, M. R. Lascu, L. Mățiu-lovan and D. C. Ciobanu, "Software Optimization used to Automate Decellularization," 2022 International Symposium on Electronics and Telecommunications (ISETC), Timisoara, Romania, 2022, pp. 1-5, doi: 10.1109/ISETC56213.2022.10010027.

**D. D. BONCIOG,** V. Laurențiu Ordodi, M. R. Lascu, L. Mățiu – lovan and D. C. Ciobanu, "Software Validation For Automatic Heart Decellularization," 2021 16th International Conference on Engineering of Modern Electric Systems (EMES), 2021, pp. 1-4, DOI: 10.1109/EMES52337.2021.9484106.

**D. Bonciog,** M. Lascu, L. Mățiu-lovan, R. Ionel, C. Burian, V. Ordodi, Modified Langendorff experimental device for rat heart decellularization with a vibrating fluid column, in 2020 International Symposium on Electronics and Telecommunications (ISETC), 5-6 Nov. 2020, Timisoara, Romania, DOI: 10.1109/ISETC50328.2020.9301149.

L. Mățiu-lovan, V. Ordodi, R. Ionel, **D. Bonciog**, Virtual Instrumentation based Prototype for Evaluation of the Cardiac Systolic Function, in 2020 International Symposium on Electronics and Telecommunications (ISETC), 5-6 Nov. 2020, Timisoara, Romania, DOI: 10.1109/ISETC50328.2020.9301047.

Scientific papers published in journals:

1. **D. Bonciog**, V. Ordodi, L. Mățiu-lovan, G. Bărbulescu, C. Burian, D. Goje, P. Buică, V. Păunescu, Modified Langerdoff device for rat heart decellularization. Timișoara : Fiziologia-Physiology, Vol. 2., 17-20, 2019.
2. V. Ordodi, L. Mățiu-lovan, **D. Bonciog**, G. Bărbulescu, C. Burian, D. Goje, P. Buică, V. Păunescu, Experimental electrophysiological device for the appreciation of the cardiac systolic function – a pilot study. Timișoara : Fiziologia-Physiology, Vol. 2., 4-8, 2019.

Patents:

1. Cerere brevet invenție nr. 253 18 / 10.10.2022 Dispozitiv electrostatic pentru măsurarea tensiunii electrice cu element indicator optic. Autori: V. Ordodi, D. Vătău, L. Mățiu-lovan, R. Ionel, **D. D. BONCIOG**, M. Dan, A. Pana, ..., V. Păunescu.

## **DRIVING LICENCE**

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**Driving Licence:** B

## **SKILLS AT WORK**

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**Skills at work:**

- sociable, responsible, ambitious, quick to learn, teamwork, spirit of observation;

## **OTHER**

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**Other:**

- creating string-art work, skill acquired in free time;

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