



Klementina Vidjak

WORK EXPERIENCE

03/2019 – 02/2020 Split, Croatia

SOFTWARE ENGINEERING INTERN MAURER ELECTRONICS SPLIT

- Learning how to code in Java, JavaScript and Python,
- Performing software test and implementing testing frameworks,
- Getting familiar with all parts of software product development and deployment,
- Developing a web application intended for internal company use.

Department Software engineering/ programming

03/2018 – 02/2020 Split, Croatia

STUDENT TEACHING ASSISTANT FESB, UNIVERSITY OF SPLIT

Helping students during their laboratory exercises in following subjects: Electronic elements and circuits, Digital electronics and Digital instrumentation

Business or Sector Education | **Department** Electronics

03/2019 – 06/2019 Split, Croatia

CONFERENCE ORGANIZATION AT SPLITECH 2019 AND IOT DAY FESB, UNIVERSITY OF SPLIT

I worked as a part of the team for the organization of an IT conference SpliTech 2019. Besides that, we organized the first-ever IoT Day (Internet of Things Day) at our university which was a one-day conference allowing students to get acquainted with this technology.

Department Event organization for an IT conference

07/2018 – 09/2018 Aachen, Germany

SUMMER ENGINEERING INTERN P3 COMMUNICATIONS GMBH (*IN THE MEANTIME CHANGED NAME TO UMLAUT COMMUNICATIONS GMBH)

Internship project which required setting up an indoor navigation system. The following were included in some of my tasks:

- Choosing the best localization algorithm,
- Programming in C++,
- Working with hardware such as Raspberry Pi, ESP32 microcontroller,
- Setting up a data collection server etc.

Department Electronics and software engineering

10/2018 – 10/2020 Split, Croatia

FACULTY STUDENT COUNCIL SECRETARY STUDENT COUNCIL OF FESB, UNIVERSITY OF SPLIT

The main activities on this position were:

- Participating in Faculty Council meetings and voicing the opinion of students,
- Contributing to the organization of engineering student games (STEM GAMES 2019),
- Contributing to the organization of various student activities within our faculty.

Business or Sector Other service activities | **Department** Volunteering

11/2016 – 02/2020 Split, Croatia

VOLUNTEERING FOR IAESTE IAESTE (INTERNATIONAL ASSOCIATION FOR THE EXCHANGE OF STUDENTS FOR TECHNICAL EXPERIENCE), LC SPLIT

Secretary (11/2017 – 03/2018)

- Making sure the entire local committee is operating properly

Job-raising and marketing coordinator (11/ 2017 – 03/2018)

- Arranged meetings with possible host companies and university professors,
- Promoted our organization through social networks, at student fairs etc.,
- Attended National councils and CEC (Central European Convention in Vienna, 2017).

Department Volunteering | **Website** www.iaeste.hr

● **EDUCATION AND TRAINING**

11/2020 – 11/2023 Rome, Italy

PHD IN INFORMATION AND COMPUTER TECHNOLOGY DIET, Sapienza University of Rome

PhD curriculum: Applied Electromagnetics

The PhD thesis concentrates on developing a dielectric spectroscopy with a microwave thermal ablation (MTA) antenna.

The following topics were researched during the course of the PhD:

- Different dielectric spectroscopy methods applicable to antennas
- MTA treatment and ablation antenna types
- Antenna designs were simulated in CST software
- Ex-vivo measurement of dielectric properties of animal lungs and livers

During the first year of the PhD, I spent three months at the Transactional Medical Device Lab (TMDLab) at the National University of Ireland, in Galway, Ireland. During this period, I measured the dielectric properties of lung tissue before and after MTA treatment, and in respect to the inflation level of the lungs.

Field of study Information and Communication Technologies

10/2018 – 10/2020 Split, Croatia

MASTER OF SCIENCE FESB, University of Split

Graduate study programme of Electronics and Computer Engineering

Field of study Electronics and automation | **Final grade** 5 | **Type of credits** ECTS | **Number of credits** 120 |

Thesis COAXIAL PROBE FOR MEASURING DIELECTRIC PROPERTIES OF BIOLOGICAL MATERIALS

10/2015 – 09/2018 Split, Croatia

BACHELOR OF SCIENCE FESB, University of Split

Undergraduate study programme of Electrical Engineering and Information Technology; direction- Electronics and Computer Engineering

Field of study Electronics and automation | **Final grade** 5 | **Type of credits** ECTS | **Number of credits** 180 |

Thesis Interactive flower

● **LANGUAGE SKILLS**

Mother tongue(s): **CROATIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	C1	C1	C1	C1	C1

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ITALIAN	B1	B1	B1	B1	B1

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

● DIGITAL SKILLS

Microsoft Office

● ADDITIONAL INFORMATION

PUBLICATIONS

[Measurement of lung dielectric properties](#) – 2021

Conference paper presented at the 13th International Congress of Hyperthermic Oncology

Vidjak, K., Farina, L., Ruvio, G., O'Halloran, M., Cavagnaro, M.

[Accuracy of De-Embedding Models for the Open-Ended Coaxial Probe Considering Different Calibration Standards](#)

– 2022

Conference paper presented at the 6th European Conference on Antennas and Propagation, EuCAP 2022

Vidjak K., Cavagnaro M.

[Dielectric spectroscopy using a microwave ablation antenna operating at 5.8 GHz](#) – 2022

Conference paper presented at 34th Annual Meeting European Society for Hyperthermic Oncology

Vidjak K., Cavagnaro M.

[Broadband Dielectric Spectroscopy with a Microwave Ablation Antenna](#) – 2023

Journal paper published in SENSORS

Vidjak K., Hessinger C., Cavagnaro M.

[Dielectric Properties of Healthy Ex-Vivo Ovine Lung Tissue at Microwave Frequencies](#) – 2023

Journal paper published in IEEE Transactions on Dielectrics and Electrical Insulation

Vidjak, K., Farina, L., Ruvio, G., O'Halloran, M., Cavagnaro, M.

[Microwave Thermal Ablation: Advancements and Future Perspectives](#) – 2023

Conference paper presented at 2023 Photonics & Electromagnetics Research Symposium (PIERS)

Vidjak K., Liporace F., Cavagnaro M.

Dielectric Spectroscopy with the Microwave Ablation Antennas operating at 2.45 and 5.8 GHz – 2023

Conferences paper for the 2023 IEEE International Conference on Antenna Measurements and Applications in Genova

Vidjak K., Cavagnaro M.; Accepted

First Experimental Results and Open Challenges in Microwave Imaging for Liver Ablation Monitoring – 2023

Conferences paper for the 2023 IEEE International Conference on Antenna Measurements and Applications in Genova

R. Scapatucci, R. Palmeri, K. Vidjak, S. Constanzo, L. Crocco, M. Cavagnaro; Accepted

HONOURS AND AWARDS

2020

Rector's Award for excellence for achievements in the academic year 2018/2019 – University of Split

2019

Dean's list for academic excellence (given in academic year 2017/18 for the best undergraduate student in Electrical Engineering and Information Technology) – FESB, University of Split

2018

Scholarship Holder of Zoran Djindjic Internship Programme of German Business for the Countries of Western Balkan – Zoran Djindjic Internship Programme of German Business for the Countries of Western Balkan

Scholarship Holder of City of Split Scholarship Fund for students – City of Split

OTHER SKILLS AND PROJECTS

Programming languages

Intermediate level:

- C/C++ (also had some experience with OpenCV lib.), HTML, CSS (used in university courses, projects, P3 communications GmbH, and bachelor's thesis),
- Java, JavaScript (both native and Vue framework) and Python (used in Maurer Electronics Split and during my PhD).

Basic level:

- PHP, SQL (used in university courses, projects, P3 communications GmbH, Maurer Electronics Split),
- C# (used in university courses).

Skills concerning the field of study

- Performing electrical measurements, electrical circuit analysis, solving problem tasks (all gained during my education),
- Performing simulations in CST Studio Suite® 2021 (Dassault Systèmes, VélizyVillacoublay, France,
- Experience with microcontrollers and development boards such as Arduino, Raspberry PI etc.
- Experience with 3D printing and soldering (bachelor's thesis, casing for a course project and internship),
- Experience setting up a wireless device network (course Wireless sensor networks and internship) and a data collecting server

Projects

- Master thesis with the title "Coaxial probe for the measurement of dielectric parameters of biological materials",
- Web application (both frontend and backend) for monitoring the software development and testing process in a software production company (Maurer Electronics Split),
- Development of an indoor navigation system based on Wi-Fi signal (proof of concept done during my internship in P3 communications GmbH),
- Bachelor thesis (09/2018)- automated blooming flower lamp with various other functionalities,
- Wireless meteorological system (06/2018) along with my colleague Marina Vidovic (developed during the course Wireless sensor networks)- tracking weather conditions from a remote location in real time.