



Universidad  
del Cauca



FRIEDRICH-ALEXANDER  
UNIVERSITÄT  
ERLANGEN-NÜRNBERG

25-32.7-007 2020

## **AGREEMENT ON THE DOUBLE SUPERVISION AND EXAMINATION OF A DOCTORAL THESIS**

On the basis of the General Doctoral Regulations of Friedrich-Alexander-Universität Erlangen-Nürnberg (RPromO) as of 21<sup>st</sup> January 2013, last revised 20<sup>th</sup> February 2019, in conjunction with the Faculty Doctoral Regulations for the Faculty of Engineering (FPromO Tech) as of 21<sup>st</sup> January 2013, last revised 18<sup>th</sup> August 2017 and article 6 in conjunction with article 64 of the Bavarian University and College Act (BayHSchG) as of 23<sup>rd</sup> May 2006, in the applicable version

and the doctoral regulations of the PhD Program in Telematics Engineering of the Faculty of Electronics and Telecommunications Engineering of the Universidad del Cauca, Colombia which follows the requirements according to the Resolution of the Ministry of Education N° 6905 of May 14<sup>th</sup>, 2015.

the

Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU)  
acting through its Faculty of Engineering,  
Martensstrasse 5a  
91058 Erlangen, Germany,  
represented by the President Professor Dr.-Ing. Joachim Hornegger

and the

Universidad del Cauca (Unicauca)  
Acting through its Faculty of Electronics and Telecommunications Engineering,  
Calle 5 No 4-70,  
Popayán, Colombia  
represented by the President Dr. José Luis Diago Franco

hereby agree upon the joint supervision and examination of the doctoral thesis undertaken by the doctoral student CAROLINA RICO OLARTE.

The doctoral student CAROLINA RICO OLARTE fulfilled the admission requirements of the Doctoral program in Telematics Engineering, and she is currently enrolled as doctoral student of such a program at Unicauca.

**OBJECT:** Both institutions are interested in joining academic efforts for the joint double supervision and examination of the doctoral thesis of Ms. RICO OLARTE, citizen of Colombia, born on February 16<sup>th</sup>, 1992, with ID 1.061.745.815, who is Doctoral student of Telematics Engineering at Unicauca.

### **Section 1 – General provisions**

CAROLINA RICO OLARTE is eligible to pursue a doctoral degree according to the General Doctoral Regulations of FAU, the Faculty Doctoral Regulations for the Faculty of Engineering at FAU, and the doctoral regulations of the Faculty of Electronics and Telecommunications Engineering, Doctoral program in Telematics Engineering, of the Unicauca.

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## Section 2 – Administrative issues

### 2.1 Joint supervision, topic, and expected duration

The joint supervision of the thesis undertaken by CAROLINA RICO OLARTE begins as of September 2019. The thesis is entitled "Framework for Explicit Overtime User Experience Evaluation eHealth Solutions". The thesis is expected to be submitted within three years (six semesters), according to the doctoral regulations in the Faculty of Electronics and Telecommunications Engineering at Unicauca.

### 2.2 Preliminary schedule for stays at both partner universities

An appropriate duration of work at each university is required. It will be assured, that Ms RICO OLARTE will stay at least 6 months at each of the partner universities. The prospective schedule is as follows: CAROLINA RICO OLARTE will stay at Unicauca during the summer semester 2019 (I semester 2019), the winter semester 2020 (II semester 2020) and the summer and winter Semesters 2021 (I and II semesters 2021), and the student will be staying at FAU during the winter semester 2019/20.

Considering that the doctoral program in Engineering at FAU does not include lectures to attend, that in Germany all of the doctoral activity consists of doctoral research; and that the doctoral program in Unicauca consist mainly in doctoral research; the credits to be completed by the student within the doctoral program in Telematics Engineering at Unicauca are described in Table I.

Code	Name of the doctoral activity	Credits	Type of Activity	Planed Term at Unicauca
TC05	Teaching practice II	3-6	Research Activity	Summer Semester 2020
TI06	Research seminar II	3	Lecture	Winter Semester 2021
TI07	Research internship II	16	Research Activity	Winter semester 2020, Summer Semester 2021
TI08	Publications	6-9	Research Activity	Completed after minimum a JCR or SJR Q1 or Q2 Publication
TI09	Doctoral Thesis I	9	Research Activity	PhD Thesis proposal defense
TI10	Doctoral Thesis II	56	Research Activity	PhD Dissertation defense

Table I. Credits at Unicauca

The doctoral research activities completed at FAU during the co-supervision process will be recognized as credits at Unicauca as described in Table II.

FAU	Recognized at Unicauca		
	Code	Name of the doctoral activity	Credits
Research activities Co-supervised between the Tutor from Unicauca and the Tutor from FAU	TI07	Research internship II	16
	TI09	Doctoral Thesis I	9
	TI10	Doctoral Thesis II	56

Table II. Doctoral Research Activities at FAU recognized as credits at Unicauca



The Professor Diego Mauricio López Gutiérrez will give a grade to the student that corresponds to the topics of Research and Doctoral Seminar of the Doctoral program in Telematics Engineering at Unicauca. Such evaluation will be given considering the achievements of the student in the research activities jointly supervised by Prof. Dr. Ing.-habil Björn Eskofier from FAU and Prof. Dr. Ing. Diego Mauricio López Gutiérrez from Unicauca. Prof. Dr. Ing.-habil Björn Eskofier will send reports of the activities performed by CAROLINA RICO OLARTE during her time at FAU.

### **2.3. Registration, payment of administrative and tuition fees**

CAROLINA RICO OLARTE will be admitted as a doctoral candidate at both universities. CAROLINA RICO OLARTE will pay the required administrative fees at the Leading University (Unicauca) during her whole doctoral activities, even during her stay at FAU. She will be matriculated as a doctoral student at FAU and during her stay there she will pay the required administrative fees for student services (student union, semester ticket).

### **2.4 Additional individual costs**

The doctoral candidate covers all her additional individual costs incurred by the joint supervision and the required stays at both universities. The doctoral candidate must have insurance coverage which is valid in the respective country of residence during her stays in Colombia or Germany. The candidate is responsible for insuring herself for all foreseen and unforeseen healthcare expenses, as well as arranging personal liability insurance.

### **2.5 Time and costs for the joint supervision and examination, additional funding**

The supervisors commit to allocate the necessary time for the joint supervision as well as the joint examination. In case any additional funding is necessary for completing the project, it would need to be arranged by a separate agreement.

### **2.6 Language**

The thesis will be written in English, with title and a comprehensive summary in English, German and Spanish. It should be assured that the written evaluations of the reviewers can be understood by each examiner involved in the evaluation procedure. The oral examination will be held in English. A written summary will be presented in English, German and Spanish.

## **Section 3 – Supervision and examination**

### **3.1 Supervision**

At the Faculty of Engineering at FAU the doctoral work will be supervised by Prof. Dr.-Ing. habil. Björn Eskofier.

At the Faculty of Electronics and Telecommunications Engineering of Universidad del Cauca, the doctoral work will be supervised by Prof. Dr.-Ing. Diego Mauricio López Gutiérrez.

### **3.2 Submission and acceptance or rejection of the thesis**

The doctoral candidate submits the thesis at Unicauca where the oral examination procedure will take place ("Leading University").





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The candidate is responsible to inform FAU about the submission of the thesis and for initiating administrative processes regarding graduation at both partner universities.

In charge of the doctoral process are:

At FAU:

Office of Doctoral Affairs at the Faculty of Engineering Faculty of Engineering  
Martensstr. 5a  
91058 Erlangen  
tf-promotionsbuero@fau.de

At Unicauca:

Program Committee, PhD Program in Telematics Engineering of the Faculty of  
Electronics and Telecommunications Engineering  
Universidad del Cauca  
Campus Tulcan  
Cra. 2 # 4N-140, Popayán, Cauca  
arendon@unicauca.edu.co

The written thesis will be evaluated by a minimum of five reviewers, including both supervisors, according to the regulations in force at the leading university. Written evaluations shall comment on the scientific quality of the thesis and give grades according to 3.5.

When the thesis has been submitted to and accepted by the Faculty of Electronics and Telecommunications Engineering of Unicauca, it will be forwarded to the Faculty of Engineering of FAU for approval.

Should the Faculty of Engineering of the FAU not approve the thesis, the joint procedure is terminated and the examination will continue according to the doctoral regulations of the Faculty of Electronics and Telecommunications Engineering of Unicauca.

### **3.3. Composition and appointment of the examination board**

The examination will be held by an examination board according to the regulation in force at the Leading University (Unicauca), with both supervisors being members of the examination board. The members are nominated in agreement between the supervisors and the postgraduate committees of both partner universities; the examination board must include both supervisors and should include one member of the Department of Telematics at Unicauca and two national reviewers respective for both countries, one from FAU in addition to the supervisor. They will be appointed by the postgraduate committee of the Leading University (Unicauca).

### **3.4 Oral examination**

After the written thesis was approved by both partner universities, one joint oral examination is held at the Leading University (Unicauca). It is recognized by both parties. A joint report of the examination, mentioning the given grades according to 3.5 will be presented in English.

### **3.5 Grading**

The grades will be determined according to the regulations in force at the institution where the examination procedure takes place. Equivalent grades at the partner



university will be determined by the examination board according Table III. The grades according to the respective regulations at each University are:

Unicauca Grades	FAU Grades
Approved	„Mit Auszeichnung bestanden“ (with distinction)
	„Sehr gut bestanden“ (excellent)
	„Gut bestanden“ (good)
	„Befriedigend bestanden“ (satisfactory)
	„Ausreichend bestanden“ (sufficient)
Not approved	„Nicht bestanden“ (insufficient)

Table III. Grading of the thesis and the oral examination

## Section 4 – Certificate, depository copies and publication requirements

### 4.1 Awarding the degree

Upon the completion of the joint examination procedure and fulfilment of all relevant academic requirements at both institutions, the Faculty of Engineering of FAU will award CAROLINA RICO OLARTE the grade “Doktor der Ingenieurwissenschaften (Dr.-Ing.)”. The Faculty of Electronics and Telecommunications Engineering of Unicauca will award CAROLINA RICO OLARTE the grade “Doctor in Telematics Engineering”. Both universities will issue separate certificates according to their respective regulations. Both certificates clearly state that one doctoral degree has been awarded in a cotutelle procedure and that therefore both certificates are only valid in combination.

The certificates enable CAROLINA RICO OLARTE to use the academic grade “Doktor der Ingenieurwissenschaften (Dr.-Ing.)” in Germany and the academic grade “Doctor in Telematics Engineering” in Colombia. Both certificates are only valid together.

### 4.2 Depository copies and publication requirements

The number of depository copies and the publication requirements for the thesis are based upon the relevant regulations of the institution where the examination procedure takes place. The candidate must submit to FAU 7 copies of the thesis within a year after passing the oral examination.

Furthermore, the examination board has to be provided with as many copies of the thesis as examiners are involved in the examination procedure and one to remain with the examination files of each institution.

The certificates will be issued once the publication requirements are fulfilled.

## Section 5 – Modification, termination

This Agreement can be modified by an amendment signed by the legal representatives of the Parties. A modification agreement is not required in the event that, in derogation from Section 2.1, the doctoral candidate needs up to eight instead of six semesters for the completion of his dissertation and the supervisors agree with the extension.





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In the event of disagreement, the Parties shall endeavor to settle their dispute amicably. If a settlement cannot be reached, the agreement may be legally terminated by either party in the event of default by the other party of one or more obligations under its various clauses.

Any disputes regarding this agreement shall be referred to the courts in the principal place of defendant as the exclusively agreed competent court of the first instance. This agreement and all disputes and claims arising from its subject matter shall be governed by the lex fori.

Prepared in five copies.

## Section 6 – Signatures

**FAU**

Erlangen, date of last signature:

6/16/2020

President  
Prof. Dr. -Ing. Joachim Hornegger

Dean of Faculty of Engineering  
Prof. Dr.-Ing. habil. Andreas Paul  
Fröba

**Unicauca**

Popayán, date of last signature:

28 ENE 2020

President  
Prof. Dr. José Luis Diago Franco

Dean of Faculty of Electronics and  
Telecommunications Engineering  
Prof. Dr.-Ing. Francisco José Pino  
Correa



Universidad  
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FRIEDRICH-ALEXANDER  
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The Supervisor  
Prof. Dr.-Ing. Björn Eskofier

The Supervisor  
Prof. Dr.-Ing. Diego Mauricio  
López Gutiérrez

The candidate  
CAROLINA RICO OLARTE