



**GUC German Office**

**Claudia Rodopman**  
International Coordinator

c/o International Office, Ulm University  
Helmholtzstr. 22, 89081 Ulm, Germany  
Tel. +49 (0)731/50-32513 (Mon 9am – 2pm)  
Skr. -31043 (Tue & Thu 9am – 1pm)  
Fax +49 (0)731/50-22016

Email: [guc-bachelor-thesis@uni-ulm.de](mailto:guc-bachelor-thesis@uni-ulm.de)  
<https://www.guc.uni-ulm.de/en/>

10 December 2020

## Topic Proposal Form

### International Bachelor Thesis 2021

---

<b>Supervisor</b>	<b>Univ.-Prof.- Dr. -Ing. Giovanni Del Galdo, Dr.-Ing. Alexander Ihlow</b>
<b>Institute/Department</b>	<b>Fraunhofer IIS/ Electronic Measurements and Signal Processing department (EMS) TU Ilmenau/ Electronic Measurements and Signal Processing chair (EMS)</b>
<b>E-mail address</b>	<a href="mailto:giovanni.delgaldo@iis.fraunhofer.de">giovanni.delgaldo@iis.fraunhofer.de</a> , <a href="mailto:alexander.ihlow@tu-ilmenau.de">alexander.ihlow@tu-ilmenau.de</a>

<b>Research field/Project</b>	<b>Applied Hardware Systems Research and Development</b>
<b>Description (URL for research information)</b>	<p>The EMS group is active in the area of Applied Hardware Systems Research and Development with focus on the following research aspects:</p> <ul style="list-style-type: none"> <li>- System and Hardware Design that provide synchronized, phase-coherent, multi-channel signal acquisition, transmission, and processing</li> <li>- Hardware development and integration such as integrated circuits (chip design), e.g., for analog signal processing in multi antenna systems, and FPGA programming as well as software development for software defined radios (SDRs), e.g., for high-throughput low-latency multi-channel signal acquisition and real-time signal processing</li> <li>- Software development: Example target applications are mobile radio propagation measurements (channel sounding), mobile communications, and localization</li> </ul> <p>The student will be assigned to the exact Thesis topic based on the project work available at the starting date of the Bachelor Thesis. This way the Thesis has better chances to be project-related with better practical scope.</p>
<b>Maximum number of GUC BSc students who could work on the project</b>	1

<b>Compulsory qualification of students</b>	Good Analytical Skills Good programming skills: Matlab, Python
<b>Date of stay (from – to)</b>	4-6 months, flexible starting date
<b>Remote supervision possible (Yes/No)</b>	No
<b>Additional contact partner Name and email</b>	
<b>Further comments</b>	Additionally, be aware that you can apply for a student job or internship on a related topic.