



INTERNSHIP PROGRAM FOR INTERNATIONAL STUDENTS

INTERNSHIP SUBJECT FORM

Name of the Host Laboratory	LIX, Ecole Polytechnique
Website of the Host Laboratory	https://www.epizeuxis.net
Research Group	Epizeuxis Network Research Group
Internship Supervisor	Jiazi Yi jiazi.yi@polytechnique.edu
Internship Subject	The communication system for smart grid
Student's level	<input checked="" type="checkbox"/> Advanced Undergraduate Students (3 rd or 4 th year) <input checked="" type="checkbox"/> Master's students (1 st or 2 nd year) <input type="checkbox"/> PhD students
Proposed Duration	<input checked="" type="checkbox"/> 3 months <input checked="" type="checkbox"/> 4 months <input checked="" type="checkbox"/> 5 months <input checked="" type="checkbox"/> 6 months
Prerequisites	Major in computer science, network engineering, communication, electrical engineering or related fields. Good understanding and experiences in communication/network protocols, network simulation, programming (especially C/C++, Python, Java).
Internship description (max. 15 lines)	<p>Advanced Metering Infrastructure (AMI) system and Smart-Meter networks enable the measurement, collect and analyze energy usage, and communicate with metering devices such as electricity meters, heat meters, water meters, gas meters, on request or on schedule.</p> <p>A routing protocol, LOADng (The Lightweight On-demand Ad hoc Distance-vector Routing Protocol – Next Generation), is developed to enable efficient, scalable and secure routing in such constrained environments. As a reactive protocol, it does not always keep a routing table for all destination, but generates routing messages only when there is data to be sent in the network, to reduce routing overhead and memory consumption. It is used as the default routing protocol for G3-PLC</p> <p>This internship aims at evaluating the performance and improving the scalability, security of the routing protocol for smart grid.</p> <p>To apply or for further information, please contact the internship supervisors.</p>