

Position	Numerical Modeling and Experimental Validation for Wireless Power Transfer Exposure Assessment and Applications (PhD)
Workplace:	Zurich, Switzerland
Company:	IT'IS Foundation for Research on Information Technologies in Society (IT'IS), Swiss Federal Institute of Technology (ETH) Zurich
Description:	<p>The IT'IS Foundation is an independent non-profit research organization dedicated to improving and advancing the quality of people's lives through enhancing the safety and quality of emerging electromagnetic (EM) technologies. The Foundation's primary activities include computational EM in complex environments, computational life sciences (CLS) applied to devices in and around the human body, and the development of medical-image-based high-resolution, computable whole-body anatomical models.</p> <p>We are seeking a PhD candidate to perform research in numerical modeling and measurements to achieve breakthroughs in methods for assessment of exposure to wireless power transfer (WPT) systems. The topic will fall within the standardization activities of International Electrotechnical Commission (IEC) Technical Committee (TC) 106 Working Group (WG) 9. The position involves: (i) the use of EM solvers to assess WPT exposure, (ii) evaluation of compliance with respect to current guidelines, (iii) development of innovative approaches for assessment of medical implant safety, (iv) support of the design and optimization of WPT systems through numerical dosimetry and experimental validation.</p>
Education / Profile:	<ul style="list-style-type: none"> • MSc degree in electrical engineering, biomedical engineering, or physics • Interest in and basic knowledge of <ul style="list-style-type: none"> ○ bioelectromagnetism ○ numerical simulations of EM fields ○ measurements of EM fields ○ biomedical engineering ○ exposure assessment and design of antennas • Good knowledge of Matlab • Experience with circuit simulation a plus • Experience programming in Python a plus • Excellent command of English, knowledge of German a plus • Reliability, self-motivation, good organization skills, and aptitude to handle irregular workloads • Excellent ability to work both independently and in a team

<p>What IT'IS offers:</p>	<ul style="list-style-type: none"> • Modern research infrastructure • Outstanding, young, interdisciplinary research teams • Cooperation with leading research laboratories worldwide • Vibrant workplace in the heart of Zurich • Flexible working hours
<p>Beginning:</p>	<p>As soon as possible</p>
<p>Application Process:</p>	<p>Applications should consist of:</p> <ul style="list-style-type: none"> • Cover letter including the position title and a statement addressing the selection criteria and outlining the motivation for applying for the position • Detailed CV • Copies of degree certificates and / or diplomas, including grades • Letters of recommendation <p>For further information or to discuss the scope of this position, please contact Dr. Arya Fallahi (afallahi@itis.swiss) (phone +41 44 245 96 87).</p>
<p>Contact address:</p>	<p>Charlotte Roberts IT'IS Foundation Zeughausstrasse 43 CH-8004 Zurich Switzerland</p>