



January 22, 2020

**Object: Reference letter for Dr. Deepak AMARIPADATH**

To whom it may concern,

Deepak worked as an early stage researcher in the framework of European Project MEAN4SG ([www.mean4sg-itn.eu/](http://www.mean4sg-itn.eu/)) for the past three years. He was also enrolled as a doctoral student at UBFC under my supervision during this time. He has been a pleasure to work with, bringing his attention to detail to every aspects of the project. In addition, his communication and people skills are excellent. Deepak was awarded Doctor of Philosophy (PhD) in Electrical Engineering for his work in the field of power quality in smart grids titled “Development of Tools for Accurate Study of Supraharmonic Emissions in Smart Grids” in November 2019. He is cheerful in the face of daunting deadlines, and always available to lend a hand to his co-workers when necessary.

Deepak worked with the design, characterization, and implementation of the measurement systems for high frequency emissions in the electrical networks. He also performed the electrical network measurements as part of his project. In addition, he developed a test bench for the generation and acquisition of the voltage and current waveforms in the supraharmonic frequency range in the laboratory well within the desired uncertainty. I can only highly recommend him for the opportunity that you have available, as he is well suited to the challenges it provides. At all times I have found him to be a talented, dependable, reliable, and hard-working researcher, who is adaptable to new environments. I wish him all the best with his application.

If you need any additional information, please feel free to contact me.

Sincerely,



***Fei Gao***

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Trappes, 16<sup>th</sup> of December 2019

Objet : **Reference Letter for Mr. Deepak Amaripadath**

Mr. Deepak Amaripadath carried out a doctoral thesis between November 2016 and November 2019 on the topic: "**Development of tools for accurate and reliable measurements of Power Quality (PQ) in Smart Grids**".

This thesis has received funding from the European Union's Horizon 2020 research and innovation program under the project "**Metrology Excellence Academic Network for Smart Grids – MEAN4SG**", Grant Agreement no. 676042 (<http://www.mean4sg-itn.eu/>).

The Low Frequency Electric Metrology team of French National Metrology Laboratory (LNE) welcomed Mr. Deepak, whom I co-supervised with the professors at University Bourgogne Franche-Comté (UBFC) all along his thesis.

The 3 years of activity ended successfully with a platform characterized from a metrological point of view which can **generate and measure voltage and current signals rich in harmonics up to 150 kHz** and with the recommendation of the jury members to grant the title of Doctor of Engineering to Deepak.

All along this research period, some qualities of M. Deepak Amaripadath have been highlighted: successful implementation of the analog electronics, algorithm development for signal processing, feature to outline the successful results and actions, fast adaptability to new environments, ability to create succinct, concise presentations.

Therefore, I support Deepak in his applications as future researcher.



**Daniela ISTRATE**  
PhD Research Engineer  
Electrical Metrology

Dr. Robin ROCHE

Ref. RR/DA/20-1  
January 14, 2020

Dear Members of the Search Committee,

I am pleased to write this letter to give my recommendation for Dr. Deepak Amaripadath. It is my understanding that he is being considered for a position at your institution.

Please allow me to introduce myself first. I am an Associate Professor at the Université de Technologie de Belfort-Montbéliard (UTBM, [www.utbm.fr](http://www.utbm.fr)) and at the FEMTO-ST institute, in Belfort, France. UTBM is one of the top and largest five-year engineering schools in France, and has a strong program in Energy at the diploma (Master's degree) and Ph.D. levels, with a focus on electrical engineering. With over 900 researchers, FEMTO-ST is one of the largest French research laboratories in the field of engineering, and is affiliated with the French National Center for Scientific Research (CNRS), UTBM, and other universities.

I was one of Dr. Amaripadath's Ph.D. supervisors at UTBM<sup>1</sup>, from 2016 to 2019. He was funded through the MEAN4SG project ([www.mean4sg-itn.eu](http://www.mean4sg-itn.eu)) of the European Commission's H2020 program. While working toward his Ph.D. degree, he accomplished most of his work at the French national metrology institute, LNE, and made several rotations at FEMTO-ST, at EDF R&D and at METAS. His scientific contributions were on the accurate measurement of supharmonics (2-150 kHz) and the analysis of their behavior in modern electricity distribution systems. Deepak's work was published in 4 international conference papers.

From my interactions with him, I have observed Dr. Amaripadath's very good ability to quickly learn about a new field, to write detailed reports and papers autonomously, to conduct experimental work in the field of metrology and to deliver clear and efficient presentations. I also know that he will very keen to teach and transfer his knowledge to students. I therefore recommend Dr. Amaripadath for a position at your institution.

If you require further information, feel free to contact me at by email or phone.



Sincerely,

Dr. Robin ROCHE

Associate Professor  
FEMTO-ST Institute, University of Technology of Belfort-Montbéliard

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1 UTBM is part of Université Bourgogne Franche-Comté (UBFC, [www.ubfc.fr](http://www.ubfc.fr)), which is a federation of universities. All Ph.D. degrees awarded within UBFC members are awarded by UBFC.



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