Aghilas Sini
INRIA, 615 Rue du Jardin botanique
54600 Villers-lès-Nancy
France

August 19, 2016

Dear Prof. Delais-Roussarie and Prof. Lolive,

I am writing to express my interest in the open PhD position titled "Characterisation and generation of expressivity in function of speaking styles for audiobook synthesis". I am currently a research engineer with the Multispeech team, at LORIA-INRIA laboratory Nancy, France, where I am pursuing my interest in automatique language and speech processing for the past two years. I am submiting this letter of application for the PhD position, you are proposing, and I believe that my experience so far and my quest for knowledge make me qualified to meet the needs of the program.

At LORIA-INRIA, I have been working in the area of Computer-Assisted Spoken Language Learning to assist German speakers to learn French. My contribution is towards both the speech signal processing and machine learning aspects. It includes speech feature extraction, speech modification and dynamique programing. In addition, we aim at detecting errors due to the interference between the first and the second languages of the learner and assist him to correct them by given audio feedback using speech synthesis techniques as TD- PSOLA. This work will appear in Proceedings of Interspeech 2016 [1]. Recently, I attended lectures on modern speech synthesis engines which gave me a wild overview of the area and its chanlenges. My master's internship with Emmanuel Vincent and François Charptier explored audio source localisation by mobile robot. As a result of this thesis, a novel approach based on grid occupancy was proposed. This work was published in IEEE ICASSP 2015 Conference[2]. These experiences enhanced my

[1] Ghosh, S., Sini, A., Laprie, Y. & Camille Fauth, C. 2016. L1-L2 interference: the case of final devoicing of French voiced fricatives in final position by German learners. To appear in Proceedings of Interspeech 2016, San Francisco.

[2] E. Vincent, A. Sini and F. Charpillet, "Audio source localization by optimal control of a mobile robot," Acoustics, Speech and Signal Processing (ICASSP), 2015 IEEE International Conference on, South Brisbane, QLD, 2015, pp. 5630-5634.

research skills and exposure. My MSc courses on signal processing, pattern recognition and machine learning laid the foundation of these skills.

While contributing to the development of open source speech such as JSnoori, JTrans and JSafran tools at LORIA-INRIA, I gained expertise in different programming languages like C/C++, Java, Python and JavaScript. At the same time, I gained a valuable experience in implementing various speech signal processing algorithms and got well acquainted to cluster computing environment and tools for coding within the team project. Recently, I was introduced to festival frameworks for text-to-speech synthesis and TensorFlow for the implementation of deep learning architectures. Similarly, during my MSc internship, I worked with Kinect based robot audio acquisition. These allowed to improve my ability to easily adapt to new R& D environments.

The above experiences have made me well aware of the challenges of the research. As an individual, I also got the opportunity to develop my communication skills towards team working. Indeed, working on multi-disciplinary projects involved coordination within team as well as collaboration with other teams.

Looking forward to discuss with you.

Sincerely,

Aghilas Sini

Attached: Curicullum Vitae