Applications are invited for a four-year PhD studentship at The University of Texas at Austin, USA. The project focuses on investigating the next generation analog IC design automation tool. The student will work in Prof. Nan Sun’s group (https://scholar.google.com/citations?user=dtUMGuMAAAAJ&hl=en) and will be supervised by Prof. Bo Liu (https://scholar.google.com/citations?user=G-K3GC0AAAAJ&hl=en) remotely. The studentship is available from 1st September 2018.

In a modern system-on-chip, although the analog circuit area is usually less than 20%, its required design efforts can be more than 80%. The computational intelligence-based analog IC design automation research has been carried out for 20 years in the academic world, but such methods are seldom used by real-world engineers. This project aims at solving the bottlenecks of existing analog IC design automation methods and bringing transformative change to the way analog circuits are designed. It will lead to greatly enhanced productivity and circuit performance if successful.

This project is international based and is mainly funded by the US National Science Foundation. The analog IC design expertise from the US and analog IC design automation expertise from EU are combined. Three PhD students will collaborate in this project focusing on analog IC design assisted by novel design automation tools (supervised by Prof. Nan Sun), analog IC schematic-level design automation (supervised by Prof. Bo Liu) and analog IC layout design automation (supervised by Prof. David Pan). This studentship focuses on the second topic.
Applicants should at least hold a BSc degree in computer science, electrical/electronic engineering or mathematics. Applicants who are doing his/her master study is highly encouraged. Competence in evolutionary computation is essential. Competence in machine learning (mainly regression, surrogate modeling) is desired. Strong programming skills, in particular, MATLAB programming, are essential. The applicant should have basic knowledge of analog circuit (attended undergraduate level analog circuit analysis class is valid). Informal inquiries are very welcome.

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