Proposal for Special Session on
"Non-parallel Support Vector Machine classifiers"
IEEE Symposium Series on Computational Intelligence (IEEE SSCI 2018)
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Organized by:

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Aims and Scope:

Parallel hyperplane classifiers such as Support Vector Machine (SVM) with its strong theoretical framework found diverse applications in many areas of engineering and science, including artificial intelligence, control engineering, operation research and economy. However, over the past few decades, these conventional methods have faced bottlenecks such as sensitivity to feature and label noise and high time complexity. In this regard, non-parallel classifiers such as Twin Support Vector Machine have drawn considerable attention of research community. These new advancements in non-parallel hyperplane based classification techniques have provide significant benefits including fast learning speed, ease of implementation and ability to capture diversity among classes. However, there still exist some challenges in the applications including high dimensionality, need for large training data and sensitivity to outliers. Although the current research in this field has shown promising results, several research issues need to be explored as follows. There is a need to explore novel methods of training and prediction to improve computational performance along with interpretation, and to explore such techniques for large scale data.

This special session aims to bring together the current research progress (from both academia and industry) on novel non-parallel support vector machine classifiers to address abovementioned challenges. Further, this special session will also provide insight about other viable alternatives for researcher (especially from industry) who extensively need classifiers but lack the expertise in using machine learning techniques effectively.

Topics:
The main topics of this special session include, but are not limited to, the following:

Theories:
- Twin Support Vector Machines
- Supervised Learning
- Semi-supervised Learning
- Unsupervised Learning
- Hyper sphere based classifiers
- Large scale classifiers
- Regression with non-parallel classifiers

Applications:
- Time series prediction
- Pattern recognition
- Image Processing
- Computer Vision
- Biometrics and bioinformatics
- Natural language processing
- Big data applications

Special Session Organizers:
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Important Dates:
Paper submission due: June 15, 2018
Notification of acceptance: August 15, 2018
Author registration deadline: September 15, 2018

Paper Submission:
The papers should be submitted through IEEE SSCI's submission central. After logging into the submission system, you need to choose Special Session on "**Non-parallel Support Vector Machine classifiers**".

Information for Authors: http://ieee-ssci2018.org/submission.html
Information about IEEE SSCI 2018: http://ieee-ssci2018.org/
We look forward to receiving your high-quality submissions.