This special issue is planned in honor of the memory of Late Professor King Sun Fu who passed away in 1985. Professor Fu was widely recognized for his paramount contributions to the field of pattern recognition, especially in the area of syntactic and structural pattern recognition. Syntactic and structural pattern recognition is characterized by the view that patterns consist of primitives and relationships between them. Consequently, symbolic data structure such as strings, trees, and graphs are used for pattern representation.

The basic idea in syntactic pattern recognition is to define a pattern class through a grammar, while a set of prototypes is used in the structural approach. Syntactic and structural pattern recognition has a long history and a number of fairly mature techniques/tools have become available over the years. On the other hand, challenging issues emerge as new and novel application areas appear and they, in turn, motivate the need for more powerful grammar models, enhanced procedures for grammatical inference, more efficient structural matching procedures, and others. The objective of this special issue is to present the latest developments in this field.

Original and tutorial papers are solicited that address theoretical as well as practical issues on important aspects of syntactic and structural pattern recognition. Topics of interest include (but are not limited to):

**Theory:**
- New types of grammars with stronger generative capacity, e.g., compositional grammars, tree adjoining grammars, and others
- Issues in one-dimensional vs. multidimensional grammars, deterministic vs. stochastic languages
- Grammatical inference techniques
- Error-correcting parsing algorithms
- Matching of symbolic data structures (for example, strings, trees and graphs)
- New data structures for syntactic and structural pattern recognition
- Organization of large databases of structural prototypes
- Learning in structural pattern recognition
- Issues in complexity for recognition and learning algorithms
- Combinations of syntactic and structural pattern recognition; hybrid systems incorporating various techniques from syntactic and/or structural domain with statistical pattern recognition, neural networks, soft computing, etc.
- Links with other areas such as pattern theory, generative models, etc.

**Applications:**
- Image processing and computer vision
- Bioinformatics
- Speech and natural language processing
- Data mining and information retrieval
- Optical character recognition

**Submission Procedure:**

As an author you are responsible for understanding and adhering to our submission guidelines. You can access them by going to http://www.computer.org/mc/tpami/author.htm.

Please feel free to contact the Peer Review Supervisor, Suzanne Werner at <swerner@computer.org> if you have any questions.

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**Guest Editors:**
- Mitra Basu, National Science Foundation
  mbasu@nsf.gov
- Horst Bunke, University of Bern
  bunke@iam.unibe.ch
- Alberto Delbimbo, Universita degli Studi di
  delbimbo@dsi.unifi.it