

# International Journal of COMPUTATIONAL INTELLIGENCE IN CONTROL

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## FOREWORD

It is with great pleasure for us to introduce a new journal to the global technical community. *International Journal of Computational Intelligence in Control - IJCIC Journal* is a timely addition to the soft computing, computing with words, industrial automation, and machine intelligence area.

As we go over this first issue, it is noted that many theoretical and applied cases of machine or systems intelligence are being addressed and will set a healthy trend for the new journal. Efforts such as system construction through Petri nets and devising a method to evaluate system state spaces using a so-called “structural reasoning” are one such attempt. Technologies on the applications of fuzzy logic for the control of sampled-data time-delay systems with time-varying sampling, or fuzzy extensions of classical paradigms like the celebrated PID Controllers. Extending the paradigms of soft computing beyond control, to system identification such as the utility of the “circadian regulatory” network via ARX stochastic interactive model is another important extension of the technology of computational intelligence, covered in this new journal.

The journal can open doors to important issue such as intelligent computational tools to service oriented application, factory automation, scheduling, and planning on a factory floor. Another promising path for the new journal

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can be biologically-inspired applications either base don animal or human behavior. Efforts based on DNA and neuro-computing together with fuzzy logic based human reasoning will be a powerful combination for the journal. A paper base don Ant colony optimization inspired fuzzy control and clustering together with reinforcement learning is a good example of this approach.

A final note to the readers is that as system complexity increases, the need to paradigms addressed in this and other journals like it would become more prominent and in many cases the only viable approach. On the other hand, if a plant or system possesses a well behaved linear accurate model there may not be any need for such tools to control, estimate, observe or filter systems or signals, as the case might be.

The editor, Professor Chun-Liang Lin and editorial board of this new journal deserve our congratulations for starting this new avenue to extend the scope of soft computing technology to such areas as manufacturing, swarm optimization, data mining, production, time-delay systems, control and clustering. This journal begins its journey on an excellent path and we wish it to be a very successful addition to the global technical publication in engineering, science and technology.

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