News

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2nd European IEEE Workshop CMP'96 on

Computer-Intensive Methods in Control and Signal Processing

Due to the rapid increase in readily available computing power, a corresponding increase in the complexity of problems being tackled has occurred in the field of systems as a whole. A plethora of new methods which can be used on the problems has also arisen with a constant desire to deal with more and more difficult applications. Unfortunately by increasing the accuracy in models employed along with the use of appropriate algorithms with related features, the resultant necessary computations can often be of very high dimension. This brings with it a whole new breed of problem which has come to be known as "The Curse of Dimensionality".

The 2nd IEEE European Workshop on Computer–Intensive Methods in Control and Signal Processing, being held in Prague on August 28–30, 1996, was just aptly subtitled Can we beat the Curse of Dimensionality? The Workshop followed on from the 1st which was held at the same venue in September 1994.

The range of fields affected by the curse is broad, including control, signal processing, pattern recognition, image reconstruction, virtual reality, expert systems, nonparametric estimation, neural networks and so on. The Workshop therefore brought together interests from completely different areas, all being plagued by the common problem of high dimensionality.

Recent progress in tackling high dimensional problems however indicates that it is quite possible to home in on techniques which are successful in one area and to examine their potential across a number of fields. A key feature on the Workshop was therefore the aim for researchers in one field to both learn from and swap experiences with those in neighbouring areas. Hence a strong inter-disciplinary feature is apparent.

The loose grouping of fields covering the papers presented on the Workshop includes Geometry, both as a problem cause and a solution, Control, System Identification and finally a number of articles on the topic of artificial neural networks. Totally, there were 40 papers altogether, including the invited and poster sessions, presented by researchers from 16 countries. A very interesting Computer Session complements the bill.

The paper *System Identification using Composition Network* by Y. Moreau & J. Vandewalle (Bel) and the computer demonstration *Extension of MATLAB Parallel Accelerator* by P. Nedoma & J. Kadlec (Cz) serve as excellent samples from the workshop menu. They were awarded by prizes from a private foundation VTV supporting research and education.

The papers, in their entirety, were seen to give a good view of different approaches to tackling the curse of dimensionality, and it could be seen that a number of methods appeared to be key and hence common between the different areas.

The urgent need for an exchange of ideas led to the conclusion that the 3rd European IEEE Workshop CMP'98 will be organized by Prof. K. M. Hangos (e-mail: h1245@ella.hu) in Budapest. Anybody who wants to join the party should contact her. The availability of a number of the proceedings of the Workshop, giving much more detailed insight into the range and the quality of the presented papers, may be helpful (contact: berec@utia.cas.cz).

Luděk Berec

Světový kongres IFAC 2005 bude v Praze

Mezinárodní federace pro automatické řízení – IFAC – sdružuje národní organizace ze 48 zemí celého světa. Jejím posláním je podpora vědy a techniky v oboru automatického řízení systémů, např. inženýrských, fyzikálních, biologických, sociálních nebo ekonomických.

IFAC vydává stovky odborných publikací, několik časopisů a organizuje každý rok přes 40 mezinárodních konferencí. Jeho nejvýznamnější akcí je ale Světový kongres IFAC, pořádaný jednou za 3 roky pro 2000 účastníků. Nedávno proběhla soutěž uchazečů o uspořádání tohoto kongresu v nejbližším volném termínu – v roce 2005. V tvrdé konkurenci 6 zemí (Japonsko, Velká Británie, Jižní Korea, Itálie, Belgie a ČR) zvítězila Česká republika. Rozhodnutí padlo po úspěšné presentaci připravené za podpory firmy Škoda Plzeň.

Světový kongres IFAC 2005 se tedy bude konat v Praze. Uspořádáním kongresu byl pověřen Ing. Michael Šebek, DrSc., předsedou programového výboru bude Ing. Rudolf Kulhavý, CSc. Prezidentem světové organizace IFAC na období 2002–2005 byl zvolen Prof. Ing. Vladimír Kučera, DrSc.

Přípravy na tuto významnou akci vlastně již začaly. Jejich součástí byla i slavnostní recepce pro významné představitele IFAC, kterou organizátoři budoucího kongresu uspořádali za podpory firmy Panasonic Czech Republic na letošním kongresu IFAC v San Franciscu.

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