

In the field of Power Electronics, Electrical Drives and Motion Control the two major events in Europe were the EPE-PEMC'2002 Conference in Dubrovnik, Croatia and the EPE 2003 Conference in Toulouse, France in last two years. Organising special sessions are becoming a tradition in the EPE-PEMC Conferences. In the current issue of the EPE Journal the papers presented in one out of the fifteen special sessions of EPE-PEMC 2002 Conference entitled. "Recent Advances and Trends in Electrical Motors for Drives" are published.

It is perhaps worth mentioning a few early attempts of converting electric energy to mechanical one. One of the first was the "dc motor" fabricated by a monk called A. Jedlik in 1829 in Hungary. His rotor was a conducting frame in iron with a mercury commutator. Two years later another electrical motor was invented by Salvatore dal Negro, University of Padova, Italy. A few years passed and Herman Moritz von Jacobi built the first DC electrical drives for propulsion of a little passenger boat operated in the river Neva in Petersburg, Russia. Looking at them now they could appear as toys but they and similar ones were very significant steps leading to the production and application of the modern electric motors started between the end of the XIX and the beginning of the XX century. All that was long before the power electronics age and when motion control was only a fair attraction rather than an industry or life demand.

Today electrical motors, power electronic converters and control devices are tightly combined into adjustable speed drive systems with power ranging in several decades of magnitude from micro or nano motors for biomedical applications to huge AC motors for large pump plants or iron metallurgic industries. Even if the motor is the oldest component of an electrical drive, an increasing interest can be recognised in it by the research community in the last years, sometime catching the attention more than the other drive components can do.

This Special Issue of the EPE Journal recognises this renewed interest. It contains the updated papers of invited contributions to the 2002 EPE-PEMC Conference presented in a special session, where a large and active participation to the sessions devoted to the electric motor topic confirmed the attention to this subject. The Journal offers the readers the state of the art and the survey of the trends in the electrical motors for drives as seen by authoritative researchers working in different significant fields of application. The report is not intended to be exhaustive but it should be ample enough to stimulate debate in the community and to suggest new fields of study and research.

Finally we would like to seize the opportunity and give a short overview of the history of the EPE- PEMC Conference series. The first one dates back to 1970 and was held in Budapest like the next four conferences. It gained gradually international reputation as the oldest series in Power Electronics in Europe. 1990 was a turning point of this series. At the first time PEMC '90 was jointly organised with the Polish colleagues. In 1994 - the PEMC Conference started to wander and to circulate. PEMC '94 was held in Warsaw. PEMC '96 held again in Budapest widened the international links as it was organized jointly by the European Power Electronics and Drives Association, EPE, the IEE of Hungary (MEE), and six National Electrical Engineering Institutes from Central European countries: Austrian, Czech, Hungarian, Italian, Polish and Slovak Institutes. During the conference, an International body - PEMC (Power Electronics and Motion Control) Council - was formed for managing, organizing future PEMC Conferences. One of the main objectives of cooperation was the integration of our region into Europe and to the world Community. PEMC '98 was held in Prague. Co-sponsor was the IEEE-IES among others. Here an important Co-operation Agreement was signed between the EPE Executive Council with headquarter in Brussels and the PEMC Council with headquarter in Budapest. Since signing the Agreement, the conference series is entitled to use the abbreviation EPE-PEMC. The last two conferences were EPE-PEMC'2000 in Koper, and EPE-PEMC'2002 in Dubrovnik/Cavtat, Croatia. Both were cosponsored by EPE, IEEE-IES and Japanese IEE among others. The number of countries where participants came from was near 60.

The next EPE-PEMC Conference will be held in Riga, Latvia 2-4 Sept.,2004.

We hope to enjoy your company kind reader in Riga and have papers in special sessions there interesting enough for publishing in the EPE Journal.



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