

Report to the 26th General Assembly for 2005-2008
Tsukuba, Japan
October 14-18, 2008

The mandate of the C18 commission covers the mathematical studies of problems originating in, or relevant to physics, including mathematical models of physical systems, mathematical aspects of physical theories, and computational techniques.

The current Commission, elected at the 25th General Assembly in Cape Town, has met once during its mandate using the opportunity of attending a IUPAP sponsored conference, namely in Rio de Janeiro on August 8, 2007, at the XVth International Congress on Mathematical Physics, with about half of the members present. However, the main part of the commission business was conducted electronically and the commission recommendations were approved by an e-mail vote.

The primary objective of the Commission during its tenure has been to serve the community of mathematical physicists and represent its interests to IUPAP, in the first place by improving communication within the community and with the other branches of physical research. To this aim we have maintained and improved the C18 web site with links to various bodies and research institutions in mathematical physics, as well as a listing of conferences in the field.

We have communicated with the main professional society in the area, the International Association of Mathematical Physicists (IAMP) which was made easy due to the fact that the secretary of the IAMP is the chair of C18, and two members of the IAMP executive committee are also in the C18 Commission.

During this period we administered the support for three IUPAP supported conferences. The first one was Spectral Theory and Mathematical Physics held in Pasadena March 27-31, 2006. This meeting gathered a large number of leading experts in the world in a large spectrum of fields ranging from atomic physics to quantum field theory.

The next meeting was the main meeting in the field of our commission, the triennial International Congress on Mathematical Physics (ICMP), organized by the IAMP and held in Rio de Janeiro August 6-13, 2006. It reviewed the current trends in mathematical physics and offered a broad scale of activities including a two-day symposium for young researchers and several satellite conferences.

The third meeting was the 17th International Colloquium on Group Theoretical Methods in Physics which met in August 13-19, 2008, in Yerevan, Armenia. This meeting also belongs to a series of well attended high level meetings that have frequently received support from our commission.

In 2007 the commission recommended IUPAP support for the XVIth ICMP to be held in Prague on August 3-8, 2009. The support got preliminary approval in the C&CC meeting in Rio in October 2007.

Another way which the commission has chosen to promote excellence in mathematical physics is via prizes directed to encourage young researchers. The Young Scientist Prize statute proposed by us was approved by the IUPAP and we formed a prize committee that collected nominations and chose the winners who will be announced at the next ICMP in Prague 2009.

Pavel Exner, Chair
Peter Bowknegt, Vice-Chair
Antti Kupiainen, Secretary