

Annual Report

of IFIP Working Group **2.5**

Numerical Software

1. Reporting period

From **June 29, 2010** till **June 28, 2011**

2. Officers

At the beginning of the reporting period:

Chair:	Ronald F. Boisvert, National Inst. of Standards and Tech. (USA)
Vice Chair:	Michael Thuné, Uppsala University (Sweden)
Secretary:	Wayne Enright, University of Toronto (Canada)

Changes: **None**

3. Meetings within the reporting period

1	Date:	July 5-9, 2010	
	Place:	Katholieke Universiteit, Leuven, Belgium	
	Number of WG members present at the meeting:	16	
	Number of WG observers present at the meeting:	5	
	Remarks:	The meeting was held in conjunction with the International Congress on Computational and Applied Mathematics. The WG business meeting took place on July 8-9, 2010	

4. The next meeting of the Working Group

Date:	August 1-5, 2011
Place:	Boulder, Colorado, USA
Remarks:	The <i>IFIP WG 2.5 Working Conference on Uncertainty Quantification in Scientific Computing</i> will be held on August 1-4. The WG business meeting will follow on August 5.

5. Membership

Current number of members of the Working Group: **31**

Deleted members of the Working Group: **None**

New members of the Working Group:

First Name and Surname	Affiliation
Wu Zhang	University of Shanghai, China
Jennifer Scott	Rutherford Appleton Laboratory, UK

6. Additional activities

6.1 2010 Meeting

The WG 2.5 meeting was held in conjunction with the International Conference on Computational and Applied Mathematics 2010. This was the 15th in the bi-annual series of ICCAM conferences. Four WG members presented talks at the conference:

Craig Douglas (USA), *Algebraic Multigrid on GP-GPU Clusters*

Tim Hopkins (UK), *The Collected Algorithms of the ACM: Past, Present, and Future*

Javier Segura (Spain), *Fast and Reliable Computation of the Zeros of Special Functions Using a Fourth Order Method With Global Convergence*

Wilfried Gansterer (Austria), *Controlled Trading of Accuracy for Speed in Structured Large Symmetric Eigenvalue Problems*

In addition, three technical presentations were made at the WG 2.5 business meeting:

Shigeo Kawata (Japan), *Recent Advances in Problem-Solving Environment (PSE) Collaboration*

Kurt Lust (Observer, Belgium), *Flemish Supercomputer Center*

Ronald Boisvert (USA), *Digital Library of Mathematical Functions*

6.2 Working Conference 10

Planning for the *IFIP WG 2.5 Working Conference on Uncertainty Quantification in Scientific Computing* is in an advanced stage. The event will be held at the Millenium Harvest House Hotel in Boulder, Colorado, USA on August 1-4, 2011. The number of attendees will be in the range of 60-70. Some 25 speakers from 7 countries have accepted invitations to present. Proceedings will be assembled after the conference for publication by Springer in the IFIP series. The host of the event is the US National Institute of Standards and Technology (NIST), which is providing some \$50K(US\$) in supporting funding. The following web page provides details of the event: <http://www.nist.gov/itl/math/ifip-woco-10.cfm>.

6.3 IEEE Arithmetic Standardization

Three WG 2.5 members are participating in the IEEE Interval Arithmetic Working Group, which is developing a proposed standard. These members brief WG 2.5 at each of its meetings on this activity and obtain feedback. In 2009, WG 2.5 passed a resolution urging the IEEE group to include an exact dot product in the draft standard. This recommendation was subsequently accepted by the IEEE group.

7. Remarks

7.1 Search for New Chair

A new Chair for WG 2.5 was expected to be elected at our 2010 meeting. However, no successful candidates were able to be identified at that time. The current Chair agreed to continue until a new Chair could be identified. One of WG 2.5's founding members, Bo

Einarsson (Sweden), has agreed to solicit and collect nominations in anticipation of a vote at the 2011 meeting.

7.2 Future Meetings

The following are the tentative locations for future meetings of WG 2.5

2012 Santander, Spain

2013 Shanghai, China

2014 Vienna, Austria