The Analog Signal Processing (ASP) Technical Committee serves to foster research, development, education and industrial dissemination of knowledge relating to the theory, analysis, design, and practical implementation of analog circuits. The scope of the ASP Committee spans from basic scientific theory to industrial application. More information on this committee can be found on the world-wide web at http://ewh.ieee.org/soc/icss/committees/asptc.

Committee members are experts in the analog signal processing arena that are committed to and active within this field. The committee currently has about 72 members. In 2006, Tony Chan Carusone took over from Un-Ku Moon as chair. Felix Lustenberger serves as the chair-elect and Hanspeter Schmid serves as the secretary and web coordinator.

The following summarizes CASS-related activity by the ASP committee and its members during the year 2006-2007.

1. **ISCAS 2007**

The Analog Signal Processing (ASP) track will once again play a dominant role in ISCAS 2007 (http://www.iscas2007.org), and a great majority of ASPTC members assisted in the preparation of the technical program as well as paper evaluations. During the last ASPTC meeting in Kos, Greece at ISCAS 2006 (http://www.iscas06.org), Hanspeter Schmid was nominated and elected by the committee as the new secretary and web coordinator. In the following year, as Felix Lustenberger is to serve as the chair, Hanspeter Schmid will serve as the chair-elect. A new secretary will be nominated and elected at our upcoming ASPTC meeting in New Orleans, Louisiana at ISCAS 2007.

As we have done in the past, once again for ISCAS 2007, current ASPTC chair Tony Chan Carusone, chair-elect Felix Lustenberger, and last year’s chair Un-Ku Moon acted as Analog Signal Processing track co-chairs. These three coordinated the reviews of all papers submitted to this track. The total number of papers submitted to the Analog Signal Processing track was 418, representing 23% of all papers submitted to ISCAS 2007. Of this total, 200 papers were selected for the final program, including 70 poster presentations and 130 lecture presentations, for a 48% total acceptance rate.

The ISCAS 2007 review process for the ASP track went smoothly, primarily due to the tremendous service of the Review Committee Member (RCM) volunteers listed below:

*Analog Signal Processing RCMs:*

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution</th>
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<tbody>
<tr>
<td>Albert Wang</td>
<td>Illinois Institute of Technology</td>
</tr>
<tr>
<td>Aleksandar Tasic</td>
<td>Delft University of Technology</td>
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<tr>
<td>Alyssa Apsel</td>
<td>Cornell University</td>
</tr>
<tr>
<td>Anas Hamoui</td>
<td>McGill University</td>
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<tr>
<td>Andreas Demosthenous</td>
<td>University College London</td>
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<tr>
<td>Apisak Worapishet</td>
<td>Manhanakorn University of Technology</td>
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<tr>
<td>Bill Eisenstadt</td>
<td>University of Florida</td>
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</tbody>
</table>
Many ISCAS 2007 technical sessions will be chaired by ASPTC members, as listed below:

*Sessions sponsored by Analog Signal Processing:*

<table>
<thead>
<tr>
<th>Session Name</th>
<th>Session Co-Chair</th>
<th>Session Co-Chair</th>
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</thead>
<tbody>
<tr>
<td>Analog Circuits</td>
<td>William Eisenstadt</td>
<td>Shanthi Pavan</td>
</tr>
<tr>
<td>CAD &amp; Tools for Analog Design</td>
<td>Shahriar Mirabbasi</td>
<td>Ethan Farquhar</td>
</tr>
<tr>
<td>IC Technology</td>
<td>David Graham</td>
<td>Tuna Tarim</td>
</tr>
<tr>
<td>Mixed Signal Circuits &amp; Test</td>
<td>David Graham</td>
<td>Byunghoo Jung</td>
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</tbody>
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<tr>
<th>References</th>
<th>Jitkasame Ngarmnil</th>
<th>Pavan Hanumolu</th>
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</thead>
<tbody>
<tr>
<td>Signal Sources</td>
<td>Yichaung Sun</td>
<td>Felix Lustenberger</td>
</tr>
<tr>
<td>Amplifiers I</td>
<td>Un-Ku Moon</td>
<td>Mohammed Ismail</td>
</tr>
<tr>
<td>Amplifiers II</td>
<td>Andrea Baschirotto</td>
<td>Sameer Sonkusale</td>
</tr>
<tr>
<td>Amplifiers III</td>
<td>Paul Hasler</td>
<td>Tony Chan Carusone</td>
</tr>
<tr>
<td>Circuit Theory I</td>
<td>Jorge Fernandes</td>
<td>Hanspeter Schmid</td>
</tr>
<tr>
<td>Continuous-time Filters I</td>
<td>Rob Fox</td>
<td>Andreas G. Andreou</td>
</tr>
<tr>
<td>Continuous-time Filters II</td>
<td>Doug Frey</td>
<td>Ramesh Harjani</td>
</tr>
<tr>
<td>Wireless Circuits and Systems I</td>
<td>Igor Filanovsky</td>
<td>Albert Wang</td>
</tr>
<tr>
<td>Wireless Circuits and Systems II</td>
<td>Igor Filanovsky</td>
<td>Vadim Ivanov</td>
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<tr>
<td>Wireless Circuits and Systems III</td>
<td>Wouter Serdijn</td>
<td>Andreas G. Andreou</td>
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<tr>
<td>Wireless Circuits and Systems IV</td>
<td>Hanspeter Schmid</td>
<td>Byunghoo Jung</td>
</tr>
<tr>
<td>Wireless Circuits and Systems V</td>
<td>Chris Twigg</td>
<td>Ethan Farquhar</td>
</tr>
<tr>
<td>Interface &amp; Sensing Circuits</td>
<td>Ramesh Harjani</td>
<td>Hoi Lee</td>
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<tr>
<td>Nyquist ADCs I</td>
<td>Mohammed Ismail</td>
<td>Luis Bica Oliveira</td>
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<tr>
<td>Nyquist ADCs II</td>
<td>Pavan Hanumolu</td>
<td>Tony Chan Carusone</td>
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<tr>
<td>Nyquist DACs I</td>
<td>Shanthi Pavan</td>
<td>Un-Ku Moon</td>
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<tr>
<td>Nyquist Data Conversion I</td>
<td>Jin Liu</td>
<td>Christal Gordon</td>
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<tr>
<td>Oversampling ADCs I</td>
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<td>Tony Chan Carusone</td>
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<td>Oversampling Data Conversion I</td>
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<td>Albert Wang</td>
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<td>Oversampling Data Conversion III</td>
<td>Sameer Sonkusale</td>
<td>Felix Lustenberger</td>
</tr>
<tr>
<td>Non-Sampling Data Converters</td>
<td>Emmanuel Drakasis</td>
<td>Jin Liu</td>
</tr>
<tr>
<td>Communications Building Blocks</td>
<td>Luis Bica Oliveira</td>
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</tr>
<tr>
<td>Mixed Signal Circuits &amp; Test II</td>
<td>Ralph Etienne-Cummings</td>
<td></td>
</tr>
<tr>
<td>References &amp; Regulators II</td>
<td>Yichaung Sun</td>
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<tr>
<td>Amplifiers IV</td>
<td>Joseph S. Chang</td>
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<tr>
<td>Amplifiers V</td>
<td>Milutin Stanacevic</td>
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<tr>
<td>Analog Signal Processing</td>
<td>Andreas Demosthenous</td>
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<tr>
<td>Analog Circuits III</td>
<td>Christal Gordon</td>
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<tr>
<td>Circuit Theory II</td>
<td>Jaime Ramirez-Angulo</td>
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<tr>
<td>Continuous-time Filters III</td>
<td>Randall Geiger</td>
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<tr>
<td>Wireless Circuits and Systems VI</td>
<td>Emmanuel Drakasis</td>
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<tr>
<td>Analog Interface Circuits</td>
<td>Degang Chen</td>
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<tr>
<td>Nyquist Data Conversion II</td>
<td>Gaetano Palumbo</td>
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<tr>
<td>Nyquist Data Conversion III</td>
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<tr>
<td>Oversampling Data Conversion IV</td>
<td>Tertulien Ndjountche</td>
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</tbody>
</table>

**Other activities:**

TPC members: Tony Chan Carusone, Felix Lustenberger, Un-Ku Moon

Tutorial presenters: Vadim Ivanov, Igor Filanovski, Hanspeter Schmid

Special Sessions organizers: Wouter Serdijn
2. **Other conferences, meetings and committees**

Members of ASPTC are active in organizing and coordinating many other conferences and meetings in the CAS field. These activities are summarized in the following list:

IEEE CASS Board of Governors  
Ralph Etienne-Cummings  
Tuna Tarim  
Wouter Serdijn

IEEE CASS Distinguished Lecture Program  
Tuna Tarim, Chair

IEEE CASS Conference Division and Long Term Strategy Committee  
Wouter Serdijn

IEEE SSCS representative to IEEE CASS at CASS Board of Governors and SSCS AdCom  
Un-Ku Moon

IEEE Custom Integrated Circuits Conference (CICC)  
Ramesh Harjani, Technical Program Committee  
Un-Ku Moon, Technical Program Committee  
Tony Chan Carusone, Technical Program Committee

IEEE Asia-Pacific Conference on Circuits and Systems (APCCAS)  
Wouter Serdijn, Technical Program Committee

European Conference on Circuit Theory and Design (ECCTD)  
Jose Silva-Martinez  
Gaetano Palumbo  
Luis Hernandez  
Andreas Demosthenous

IEEE International Conference on Field Programmable Technology (FPT 2006)  
Apisak Worapishet, Publication Co-Chair

Symposium on Integrated Circuits and Systems Design (SBCCI)  
Jose Silva-Martinez, Technical Program Committee  
Jorge Fernandes, Technical Program Committee

International Symposium on Nonlinear Theory and its Applications  
Vadim Ivanov

IASTED International Conference on Circuits Signals and Systems  
Jose Silva-Martinez, Technical Program Committee member, 2007; Conference Chairman, 2006  
Wouter Serdijn, Technical Program Committee

IEEE International Solid-State Circuits Conference (ISSCC)  
Ralph Etienne-Cummings, Technical Program Committee member

SPIE, BIS, NIPS, COSI
Ralph Etienne-Cummings

IEEE Biomedical Circuits and Systems Conference (BioCAS)
   Ralph Etienne-Cummings, Program Co-chair
   Wouter Serdijn, Technical Program Committee

IEEE Midwest Symposium on Circuits and Systems
   Jose Silva-Martinez, Technical Committee
   Gabriel A. Rincón-Mora, Technical Program Chair
   Igor Filanovski, Steering Committee and Tutorial presenter

IEEE Ph. D. Research in Microelectronics and Electronics (PRIME)
   Gaetano Palumbo, Technical Program Committee

IEEE European Solid-State Circuits Conference (ESSCIRC)
   Luis Hernandez

ProRISC workshop on Circuits Systems and Signal Processing
   Wouter Serdijn, Technical Program Committee

3. Editorial boards and publications

Of particular interest to the ASPTC this year was a special section of the January 2007 IEEE Transactions on Circuits and Systems I: Regular papers, in which five analog signal processing papers appeared. Each paper is an extended version of an ISCAS 2006 publication that was solicited for the special section on the basis of excellent reviews through the regular ISCAS review process plus specific nomination by an ASPTC member. The special section was co-edited by ASPTC members Tuna Tarim and Tony Chan Carusone.

Members of the ASPTC were also active on the editorial boards of IEEE and CAS-related journals and transactions, and in promoting ASP and CAS in other publications generally, as summarized below:

Editorial boards

IEEE Transactions on Circuits and Systems I
   Associate Editors: Jose Silva-Martinez, Tuna Tarim, Andre van Schaik

IEEE Transactions on Circuits and Systems II
   Associate Editors: Shanthi Pavan, Gaetano Palumbo, Wouter Serdijn, Andreas Demosthenous, Tony Chan Carusone

IEEE CASS Trans. Biomedical Circuits and Systems
   Associate Editor & Journal Formation Committee: Ralph Etienne-Cummings

Analog Integrated Circuits and Signal Processing
   Member of editorial board: Wouter Serdijn

Journal of Applied Research and Technology
   Member of editorial board: Jose Silva-Martinez

IEEE Sensors Journal
Associate Editor: Ralph Etienne-Cummings

International Journal of Low-Power Electronics
Member of editorial board: Wouter Serdijn

VLSI Design
Member of editorial board: Jose Silva-Martinez

INE The Neuromorphic Engineer
Member of editorial board: Ralph Etienne-Cummings

The Open Electrical and Electronic Engineering Journal
Associate Editor: Andreas Demosthenous

IEEE Journal of Solid-State Circuits
Associate Editor: Un-Ku Moon

Books and book chapters


Journal publications


B. K. Thandri and J. Silva-Martinez, “A 92MHz, 80dB peak SNR SC bandpass ΣΔ modulator based on a high GBW OTA with no Miller capacitors in 0.35μm CMOS technology,” IEEE Transactions on Circuits


V. Kratyuk, P. Hanumolu, U. Moon, and K. Mayaram, "A design procedure for all-digital phase-locked


4. **Other professional recognitions**

IEEE Fellow: Gaetano Palumbo

5. **2007-2008 planned activities**

ASPTC remains strongly committed to promote CAS interests in the ASP field, and assist with organizing and coordinating CASS-sponsored activities, such as ISCAS 2008. We will continue to seek close working relationships with other CASS technical committees in co-organizing events of interdisciplinary nature, as we have done for special sessions and tutorials at ISCAS and MWSCAS in recent years. We will also maintain a broader influence in other societies such IEEE-CS and IEEE-SSCS. Finally, we hope to continue with an annual special section devoted to excellent papers in the area of analog signal processing, preferably in TCAS-I.

*Tony Chan Carusone, Chair
May 7, 2007*