



**IEEE Circuits and Systems Society  
Analog Signal Processing Technical Committee**

**Annual Activity Report  
2002-2003**

The Analog Signal Processing Technical Committee (ASPTC) of the IEEE Circuits and Systems Society focuses on the theory, analysis, design, and practical implementation of analog circuits, and the application of analog circuit theoretic techniques to system and signal processing, ranging from basic scientific theory to industrial application. Information on the committee can be found on the world-wide web at <http://www.ieee-cas.org/~asptc/>.

Committee members are renowned experts in analog signal processing who are both committed to, and active within, the ASP field. The committee currently has 55 members. In 2002, Tuna B. Tarim took over from Rob Fox as chair, and Wouter Serdijn from Tuna B. Tarim as vice-chair. Hanspeter Schmid remained as web coordinator and secretary.

The year, 2002-2003 was again very successful for ASP. The following summarizes CASS-related activity by the committee and its members.

**1. ISCAS'2003**

As usual, the Analog Circuits track thus far played and will play a dominant role in ISCAS'2003 (<http://www.iscas2003.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 Scottsdale, Arizona, a decision was made to assign two persons to coordinate ISCAS reviews starting ISCAS'2003. Based on this decision, last year's ASPTC chair, Rob Fox acted as ISCAS'2003 Analog and Signal Processing track chair and coordinating the reviews of the papers submitted to the track, and Tuna B. Tarim acted as co-chair. 423 papers were submitted to the Analog and Signal Processing track, of which 264 papers were selected for the final program.

Many ISCAS'2003 regular sessions will be chaired by ASPTC members, as listed below (even more ASPTC members will serve as session co-chairs):

*Sessions sponsored by Analog Signal Processing:*

Transconductors and OTAs  
Circuit Theory, Algorithms and Analysis  
Phase Noise and Jitter  
Mixed Signal Ics  
Analogue Signal Processing Circuits  
Data Converter Design Techniques  
Low-Noise Amplifiers  
Output Stages, Buffers and Charge Pump  
Pipeline Data Converters  
Circuits and Techniques for Wireless  
Automatic Tuning

Gaetano Palumbo  
Robert Fox  
P. R. Mukund  
Francisco Duque-Carrillo  
John Harris  
Randy Geiger  
Mourad El-Gamal  
David Allstot  
Edward Lee  
P. R. Mukund  
Andrea Baschiroto

Data Converters I	Luis Hernandez
Reference Circuits I	Vadim Ivanov
Data Converters II	Luis Hernandez
Reference Circuits II	Vadim Ivanov
Current Mode DACs	Tertulien Ndjountche
Optical Interfaces	Andreou Andreou
Integrated Inductors and Transformers	Mourad El-Gamal
Mixed-Mode and Test Circuits	Jaime Ramirez-Angulo
Sigma Delta Converters I	Terri Fiez
Oscillators I	Chris Verhoeven
Sigma Delta Converters II	Un-Ku Moon
Dynamic Translinear and Log-domain Circuits	Wouter Serdijn
Oscillators II	Chris Verhoeven
Sigma Delta Converters III	Un-Ku Moon
Dynamic Translinear and Log-domain Circuits	Wouter Serdijn
RF Circuits	Wouter Serdijn
Low-Voltage and Current-Mode Circuits	David Allstot
High-Speed Circuits	Gaetano Palumbo
Building Blocks for Analog Signal Processing	Bradley Minch
RF Power Amplifiers	Apisak Worapishet

*Sessions sponsored by other technical committees chaired by ASP members:*

Smart Imagers	Orly Yadid-Pecht
Neuromorphic Vision	Andre van Schaik
Bio-Medical Circuits and Systems II	Gert Cauwenberghs
EDGE is Cutting Edge	Markus Helfenstein

Many ASPTC members are members of the Organizing Committee for ISCAS'2003:

General Co-Chairs: S. Pookaiyaudoum, C. Toumazou; Vice Chair: J. Ngarmnil; Technical Committee: T. Lande (Chair), G. Gielen; Forum Sessions Chairs: G. Moschytz, H. Schmid; Tutorial Sessions Chairs: A. Andreou, W. Serdijn; Invited Sessions Chair: G. Cauwenberghs; US/Canada Liason: E. Sanchez-Sinencio.

## 2. Other conferences and meetings

Members of ASPTC are active in organizing and coordinating several other conferences and meetings in the CAS field. The following is just a sample:

IEEE Custom Integrated Circuits Conference (CICC) (<http://www.ieee-cicc.org/>)  
Un-Ku Moon, Technical Committee

Algerian Conference Microelectronics 2002 (ACM'02)  
Gaetona Palumbo, Technical Committee

International Conference of Electrical and Electronics Engineering 2003 (ELECO'03)  
Gaetona Palumbo, Technical Committee

IEEE Technical Activities Board Periodicals Packages Committee, 2001-2002  
Jose Silva Martinez, IEEE Circuits and Systems Society representative

IEEE-CAS Board of Governors  
Andreas Andreou, Georges Gielen, Hanspeter Schmid, Orly Yadid-Pecht

IEEE UKRI Circuits and Systems Chapter Committee  
Yichuang Sun, Vice-Chairman

IEEE Communication Society on Signal Processing and Communications Electronics  
Yichuang Sun, Technical Committee

IEEE UKRI Communications Chapter Committee  
Yichuang Sun, Committee Member

IASTED International Conference on Communications, Internet and Information Technology  
Yichuang Sun, Committee Member

Emerging Technologies (2002), IEEE Conf. Neural Information Processing Systems (NIPS)  
Gert Cauwenberghs, Track Chair

IEEE Bipolar/BiCMOS Circuits and Technologies Meeting (BCTM) (<http://www.ieee-bctm.org/>)  
Rob Fox, Short-Course Chair, Chair of the Analog/Digital/Mixed-Signal Subcommittee  
Mourad El-Gamal, Member of the Analog/Digital/Mixed-Signal Subcommittee

ISSCC, SPIE, BIS, ISCAS  
Ralph Etienne-Cummings, Program Committee

## Editorial boards and publications

Members of ASPTC are active on editorial boards of IEEE and CAS-related journals and transactions, in organizing special issues for journals, and in promoting ASP and CAS in other publications:

### Editorial boards

IEEE Transactions on Circuits and Systems II: Analog and Digital Signal Processing

(<http://edgar.ucsd.edu/tcas-ii/>)

Deputy Editor-in-chief: Georges Gielen

Associate editors: Andreas Baschiroto, Gert Cauwenberghs, Gabor Temes, Jose Silva Martinez, Un-Ku Moon

Analog Integrated Circuits and Signal Processing, Int. J. (Kluwer Academic,

<http://www.wkap.nl/journalhome.htm/0925-1030>)

Editor-in-chief: Mohammed Ismail

Mixed signal letters editor: Tuna B. Tarim

Editorial board: Philip Allen, Peter Aronhime, John Choma, Randall Geiger, Georges Gielen, Tor Sverre Lande, Kenneth Martin, Angel Rodriguez-Vazquez, Edgar Sanchez-Sinencio, Wouter Serdijn, Gabor Temes, Chris Toumazou

Instrumentation and Development (Mexican) Journal, January 2000-present

Associate Editor: Jose Silva Martinez

ProRISC workshop on Circuits Systems and Signal Processing (<http://www.stw.nl/prorisc/index.html>)

Technical Program Committee: Wouter Serdijn

IEEE Sensors Journal ([http://www.ewh.ieee.org/tc/sensors/Sensors\\_journal.htm](http://www.ewh.ieee.org/tc/sensors/Sensors_journal.htm))

Associate editor: Gert Cauwenberghs, Ralph Etienne-Cummings

### Books

G. Palumbo - S. Pennisi, Feedback Amplifiers: Theory and Design, Kluwer Academic Publisher, January 2002

Switched-capacitor filters (Chapter 85 of the Handbook on Analog Circuits and Filters; W. Kai Chen, Editor-in-Chief), José Silva-Martínez and Edgar Sánchez-Sinencio, 2573-2600, CRC Press and IEEE Press, 2002

A. van Staveren, M.H.L. Kouwenhoven, W.A. Serdijn and C.J.M. Verhoeven: Trade-offs in bandgap reference design, Chapter 6 in C. Toumazou, G. Moschytz and B. Gilbert (Editors): Trade-Offs in Analog Circuit Design, Kluwer Academic Publishers, November 2002

A. van Staveren, M.H.L. Kouwenhoven, W.A. Serdijn and C.J.M. Verhoeven: Trade-offs in frequency compensation, Chapter 10 in C. Toumazou, G. Moschytz and B. Gilbert (Editors): Trade-Offs in Analog Circuit Design, Kluwer Academic Publishers, November 2002

M.H.L. Kouwenhoven, A. van Staveren, W.A. Serdijn and C.J.M. Verhoeven: Trade-offs in low-noise design, Chapter 27 in C. Toumazou, G. Moschytz and B. Gilbert (Editors): Trade-Offs in Analog Circuit Design, Kluwer Academic Publishers, November 2002

Yichuang Sun, Editor, Wireless Communication Circuits and Systems, in press, IEE, 2003

Yichuang Sun, Wireless Communications and Transceivers - an Overview, in the book of Wireless Communication Circuits and Systems, in press, IEE, 2003

Yichuang Sun and R. Lala, Reconfigurable and Programmable Analogue and Mixed-signal Arrays, in the book of Wireless Communication Circuits and Systems, in press, IEE, 2003

J. Moritz and Yichuang Sun, Design and Automatic Tuning of Integrated Continuous-time Filters, in the book of Wireless Communication Circuits and Systems, in press, IEE 2003

### Special issues

Analog Integrated Circuits and Signal Processing: ISCAS 2002 Special Issue on Analog and RF IC Design, guest editors: Wouter Serdijn, Tuna B. Tarim and Hanspeter Schmid, to be published in April 2003

IEE Proceedings: Circuits, Devices and Systems: RF Circuits and Systems for Wireless Communications, October/December 2002, guest editor: Yichuang Sun

IEE Proceedings: Circuits, Devices and Systems: Testing of SoC: Analogue and Mixed-signal Test, August 2004, guest editor: Yichuang Sun

Special Issue on Integrated Multisensor Systems and Signal Processing, G. Cauwenberghs, R. Etienne-Cummings, R.W. Newcomb, and M.E. Zaghoul, Eds., IEEE Sensors Journal, vol. 2 (6), Dec. 2002

Special Issue of 2002 Bipolar/BiCMOS Circuits and Technology Meeting, IEEE Journal of Solid-State Circuits

Analog Integrated Circuits and Signal Processing: ISQED'2002 special issue on electronic design, guest editor: Tuna B. Tarim, to be published in May 2003

Analog Integrated Circuits and Signal Processing: Special issue, electronic design for quality, guest editor: Tuna B. Tarim, to be published in November 2003

IEEE Sensors Journal: Special Issue on Array Processing in VLSI, guest editor: Ralph Etienne-Cummings, December 2002

Analog Integrated Circuits and Signal Processing: Special issue on smart sensors, guest editor: Ralph Etienne-Cummings, to be published in spring 200

Journal publications

TCAS-II special issue on "Active IC Filters for RF and High-Speed Data Communication Systems"

T. Kajita, U. Moon, and G. Temes, "A noise-shaping accelerometer interface circuit for two-chip implementation," VLSI Design, pp. 355-361, June 2002

M. Keskin, U. Moon, and G. Temes, "Direct-charge-transfer pseudo-N-path SC circuit insensitive to the element mismatch and opamp nonidealities," Analog Int. Circuits Sig. Proc., vol. 30, pp. 243-247, Mar. 2002

M. Keskin, U. Moon, and G. Temes, "A 1-V 10-MHz clock-rate, 13-bit CMOS modulator using unity-gain-reset opamps," IEEE J. Solid-State Circuits, vol. 37, no. 7, pp. 817-824, July 2002

T. Kajita, U. Moon, and G. Temes, "A two-chip interface for a MEMS accelerometer," IEEE Trans. Inst. Meas., vol. 51, no. 4, pp. 853-858, Aug. 2002

U. Moon, K. Mayaram, and J. Stonick, "Spectral analysis of time-domain phase jitter measurements," IEEE Trans. Circuits Syst. II, vol. 49, no. 5, pp. 321-327, May 2002

Y. Ou, N. Barton, R. Fetche, N. Seshan, T. Fiez, U. Moon, and K. Mayaram, "Phase noise simulation and estimation methods: a comparative study," IEEE Trans. Circuits Syst. II, pp. 635-638, Sep. 2002

G. Giustolisi - G. Palumbo, "An Approach to Test the Open-Loop Parameters of Feedback Amplifiers", IEEE Trans. on CAS part I, Vol. 49, No. 1, pp. 70-75, January 2002

M. Alioto - G. Di Cataldo - G. Palumbo, "Design of Low-Power High-Speed Bipolar Frequency Dividers", Electronics Letters, Vol. 38, No. 4, pp. 158-160, February 2002

G. Giustolisi - G. Palmisano - G. Palumbo, "An Efficient Fuzzy Controller Architecture in SC Technique", IEEE Trans. on CAS part II, Vol. 49, No. 3, pp. 208-218, March 2002.

M. Alioto - G. Palumbo - S. Pennisi, "Modeling of Source Coupled Logic Gates", International Journal of Circuit Theory and Applications, Vol. 30, No. 4 pp. 459-477, July 2002

G. Palumbo - S. Pennisi, "Design Methodology and Advances in Nested-Miller Compensation", IEEE Trans. on CAS part I, Vol. 49, No. 7, pp. 893-903, July 2002

G. Giustolisi - G. Palumbo - S. Pennisi, "Current-Mode A/D Fuzzy Converter" IEEE Trans. on Fuzzy Systems, Vol. 10, No. 4, pp. 533-540, August 2002

M. Alioto - G. Palumbo, "NAND/NOR Adiabatic Gates: Power Consumption Evaluation and Comparison Versus the Fan-In", IEEE Trans. on CAS part I, Vol. 49, No. 9, pp. 1253-1262, September 2002

R. Mita - G. Palumbo - S. Pennisi - M. Poli, "Pseudorandom Bit Generator Based on Dynamic Linear Feedback Topology", Electronics Letters, Vol. 38, No. 19, pp. 1097-1098, September 2002

I. Boccuni - R. Gulino - G. Palumbo, "Behavioral Model of Analog Circuits for Nonvolatile Memories with VHDL-AMS", Analog Integrated Circuits and Signal Processing Vol. 33, pp. 19-28, October 2002

G. Giustolisi - G. Palumbo - S. Pennisi, "Resolution of a Current-Mode Algorithmic Analog-to-Digital Converter", IEEE Trans. on CAS part I, Vol. 49, No. 10, pp. 1480-1486, October 2002

M. Alioto - G. Di Cataldo - G. Palumbo, "Optimized Design of High Fan-In Multiplexers Using tri-State Inverter", IEEE Trans. on CAS part I, Vol. 49, No. 10, pp. 1500-1505, October 2002

W. Aloisi - G. Giustolisi - G. Palumbo, "A 1-V CMOS Output Stage with Excellent Linearity", Electronics Letters, Vol. 38, No. 22, pp. 1299-1300, October 2002

- G. Palumbo - D. Pappalardo - M. Gaibotti, "Charge Pump Circuits: Power Consumption Optimization", IEEE Trans. on CAS part I, Vol. 49, No. 11, pp. 1535-1542, November 2002
- M. Alioto - G. Palumbo, "Analysis and Comparison of the Full Adder Block", IEEE Trans. on VLSI, Vol. 10, No. 6, pp. 806-823, December 2002
- G. Giustolisi - G. Palumbo - M. Criscione - F. Cutrì, "A Low-Voltage Low-Power Voltage Reference Based on Subthreshold Mosfet", IEEE Jour. of Solid-State Circuits, Vol. 38, No. 1, pp. 151-154, January 2003
- M. Alioto - G. Palumbo, "A Simple Strategy for Optimized Design of One-Level Carry-Skip Adders", IEEE Trans. on CAS part I, Vol. 50, No. 1, pp. 141-148, January 2003
- G. Giustolisi - G. Palumbo, "A Detailed Analysis of Power Supply noise attenuation in Bandgap Voltage References", IEEE Trans. on CAS part I, February 2003
- G. Palumbo - S. Pennisi, "High-Frequency Harmonic Distortion in Feedback Amplifiers: Analysis and Applications", in print on IEEE Trans. on CAS part I, March 2003
- Y. Li and E. Sánchez-Sinencio, "A Wide Input Bandwidth 7-bit 300 M Samples/s folding and Current-Mode Interpolation ADC," accepted for publication IEEE J. Solid-State Circuits
- F. Dülger, E. Sánchez-Sinencio, and J. Silva-Martínez, "A 1.3V 5mw, Fully-Integrated Tunable Bandpass Filter at 2.1GHz in 0.35 $\mu$ m CMOS," accepted for publication IEEE J. Solid-State Circuits
- B. Xia, C. Xin, W. Sheng, A.Y. Valero-Lopez, and E. Sánchez-Sinencio, "A GFSK Demodulator for Low-IF Bluetooth Receiver," accepted for publication in IEEE J. Solid-State Circuits
- A. Nader Mohieldin, E. Sánchez-Sinencio and J. Silva-Martínez, "A 2.7V, 1.8 GHz, 4<sup>th</sup> Order Tunable LC Bandpass Filter Based on Emulation of Magnetically Coupled Resonators," to appear IEEE J. Solid-State Circuits, July 2003
- K. Shu, E. Sánchez-Sinencio, J. Silva-Martínez, and S.H.K. Embabi, "A 2.4 GHz Monolithic Fractional-N Frequency Synthesizer with Robust Phase-Switching Prescaler and Loop Capacitance Multiplier," to appear IEEE J. Solid-State Circuits, June 2003
- A.N. Mohieldin, E. Sánchez-Sinencio, and J. Silva-Martínez, "A Fully Balanced Pseudo Differential OTA with Common-Mode Feedforward and Inherent Common-Mode Feedback Detector," accepted for publication IEEE J. of Solid-State Circuits, April 2003
- P. Kallam, E. Sánchez-Sinencio, and A. I. Karsilayan, "An Enhanced Adaptive Q-Tuning Scheme for a 100 MHz Fully-Symmetric OTA-Based Bandpass Filter," accepted in IEEE J. Solid-State Circuits, April 2003
- B. Provost and E. Sánchez-Sinencio, "On-Chip Ramp Generators for Mixed-Signal BIST and ADC Self-Test," IEEE J. Solid-State Circuits, Vol. 38, No. 2, pp. 263-273, February 2003
- W. Sheng, B. Xia, A. Emira, C. Xin, A.Y. Valero-Lopez, S.T. Moon, and E. Sánchez-Sinencio, "A 3V, 0.35 $\mu$ m CMOS Bluetooth Receiver IC," IEEE J. Solid-State Circuits, Vol. 38, No. 1, pp. 30-42, January 2003



J.L. Ausín, J.F. Duque-Carrillo, G. Torelli, R. Pérez-Aloe and E. Sánchez-Sinencio, "High-Selectivity Switched-Capacitor Bandpass Filter with Quasi-Continuous Quality Factor Tunability," Analog Integrated Circuits and Signal Processing, Kluwer Academic Publ. Dordrecht, Vol. 33, pp. 117-126, November 2002

A. N. Mohieldin, A. Emira, and E. Sánchez-Sinencio, "A 100 MHz, 8mW ROM-less Quadrature Direct Digital Frequency Synthesizer," IEEE J. Solid-State Circuits, Vol. 37, No. 10, pp. 1235-1243, October 2002

T. Inoue, H. Nakane, Y. Fukuju and E. Sánchez-Sinencio, "A Design of a Low-Voltage Current-Mode Fully-Differential Analog CMOS Integrator Using FG-MOSFETs and Its Implementation," Analog Integrated Circuits and Signal Processing, Kluwer Academic Publ., Dordrecht, Vol. 32, No. 3, pp. 249-256, September 2002

A. Veeravalli, E. Sánchez-Sinencio, and J. Silva-Martínez, "A CMOS Transconductance Amplifier Architecture with Wide Tuning Range for Very Low Frequency Applications," IEEE J. Solid-State Circuits, Vol. 37, No. 6, pp. 776-781, June 2002

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Antonio Mondragon, M.C. Schneider, and E. Sánchez-Sinencio, "Well-Driven Floating Gate Transistors," Electronic Letters, No. 11, pp. 530-532, May 23, 2002

J. F. Duque-Carrillo, J. M. Carrillo, J. L. Ausín and E. Sánchez-Sinencio, "Robust and Universal Constant- $g_m$  Circuit Technique," Electronics Letters, Vol. 38, No. 9, pp. 396-397, April 25, 2002

A Feedforward Compensation Scheme for Multi-Stage Amplifiers with No-Miller Capacitors, Bharath Kumar Thandri and Jose Silva-Martinez, IEEE Journal of Solid-State Circuits, Vol. 38, pp. 237-243, February 2003

A 60 mW, 150 MHz Continuous-Time Seventh Order Linear Phase Filter with Automatic Tuning System, Jose Silva-Martinez, Jozef Adut, Miguel Rocha-Perez, Moises Robinson, and Shahriar Rokhsaz, to be published, IEEE Journal of Solid-State Circuits, Vol. 38, pp. 216-225, February 2003

A 270 MHz,  $1V_{pk-pk}$ , Low-Distortion Variable Gain Amplifier in 0.35 $\mu$ m CMOS Process, S.T. Tan and J. Silva-Martínez, to be published, Analog Integrated Circuits Design and Applications, 2003

Compact Sub-Hertz OTA-C Filter Design with Interface-Trap Charge Pump, A. Becker-Gomez, U. Ciringiroglu, and J. Silva-Martínez, to be published, IEEE Journal of Solid-State Circuits, 2003

A  $2V_{pp}$ , 80-200 MHz Fourth-Order Continuous-Time Linear Phase Filter With Automatic Frequency Tuning, M. Chen, J. Silva-Martínez, S. Roskhsaz and M. Robinson, to be published, IEEE Journal of Solid-State Circuits

Why the terms 'current mode' and 'voltage mode' neither Divide nor qualify circuits", Hanspeter Schmid, to be published in the International Journal of Analog and Signal Processing, April 2003

Yichuang Sun, C. Hill and S. Szczepanski, "Large dynamic range high frequency fully differential CMOS transconductance amplifier," *International Journal of Analog Integrated Circuits and Signal Processing*, Vol. 34, No.3, 2003

B. Pankiewicz, M. Wojcikowski, S. Szczepanski and Yichuang Sun, "A field programmable analog array for CMOS continuous-time OTA-C filter applications," *IEEE Journal of Solid-State Circuits*, vol.37, No.2, 2002

Yichuang Sun and Y. He, "Topological conditions, analysis and design for testability in analogue circuits", *Journal of Hunan University*, No.1, 2002

E. Culurciello, R. Etienne-Cummings, and K. Boahen, "An Address Event Digital Imager," *IEEE J. Solid-State Circuits*, Vol. 38, No. 2, February 2003

M. Anthony Lewis, R. Etienne-Cummings, M. H. Hartmann, A. H. Cohen, and Z. R. Xu, "An In Silico Central Pattern Generator: Silicon Oscillator, Coupling, Entrainment, Physical Computation & Biped Mechanism Control," *Biological Cybernetics*, Vol. 88, No. 2, pp 137-151, February 2003

M. Clapp and R. Etienne-Cummings, "Dual Pixel Array for Imaging, Motion Detection and Centroid Tracking," *IEEE Sensors Journal*, Vol, 2, No. 6, pp. 529-548, December 2002

V. Gruev and Ralph Etienne-Cummings, "A Pipe-Lined Differencing Imager," *IEE Electronics Letter*, Vol. 38, No. 7, pp. 315-317, March 2002

R. Etienne-Cummings, Philippe Pouliquen and M. A. Lewis, "Single Chip for Imaging, Color Segmentation, Histogramming and Template Matching," *Electronic Letters*, Vol. 38, No. 4, pp. 172 -174, February 2002

V. Gruev and R. Etienne-Cummings, "Implementation Of Steerable Spatiotemporal Image Filters on the Focal Plane," *IEEE Trans. Circuits and Systems-II*, Vol. 49, No. 4, pp. 233-244, April 2002

### **3. 2003-2004 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'2004. 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. To this end, many members of ASPTC are also members on other CASS technical committees including Biomedical, CCNAC, Communications, Neural Systems, Nonlinear, Sensors, and VLSI. In 2002-2003, ASPTC has started to publish an annual special issue, preferably in *IEEE-CAS*, if not in other journals such as Kluwer's *Analog Integrated Circuits and Signal Processing*. The first of these special issues will be published in April 2003, in Kluwer's *Analog Integrated Circuits and Signal Processing*.

Tuna B. Tarim, Chair  
April 9, 2003