

State of the Society

April 2015

Alex Acero, President

IEEE Signal Processing Society

IEEE International Conference on Acoustics,
Speech, and Signal Processing (ICASSP), 2015
Brisbane, Australia

What's New? ... A lot!

- Visibility Campaign
- New Organizational Changes
- New Conferences
- New Journals
- New Technical Directions
- Membership Growth
- New Educational Activities
- New Awards

Each is highlighted in following slides

Awareness/Visibility

- Created a SP Awareness/Visibility Committee
- Target audiences: High school and college students, other non-SP professionals
- President-Elect Rabab Ward led production of initial video, available on SPS YouTube channel:
<http://youtu.be/EErkgr1MWw0>
- Hiring PR Firm: Stern + Associates to support Visibility campaign
- Likely tagline:
Signal Processing: The Science Behind Our Digital Life
- Comments, or interest in supporting visibility activities, email: sp.info@ieee.org

Conferences - Upcoming

IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP):

- Shanghai, China – 2016
- New Orleans, LA – 2017
- Seoul, South Korea – 2018
- Brighton, UK – 2019

IEEE International Conference on Image Processing (ICIP):

- Quebec City, Canada – 2015
- Phoenix, AZ – 2016
- Beijing, China – 2017
- Athens, Greece – 2018
- Taipei, Taiwan – 2019

IEEE Global Conference on Signal and Information Processing (GlobalSIP):

- Orlando, FL – 2015
- Washington, DC - 2016

Conferences

GlobalSIP: A New Flagship

- Recently launched **symposia based** conference
 - Focused on current and emerging signal processing theoretical foundations and applications
- **Goals:** Emphasize interdisciplinary research with promising impact
- Launch: Austin, TX, 3-5 December 2013
- Prior: Atlanta, GA, 3-5 December, 2014
Event had 13 co-located symposia on special topics and 483 attendees.



IEEE GlobalSIP

- 3rd IEEE Global Conference on Image Signal Processing – GlobalSIP 2015
 - **14 – 16 December 2015, Orlando, FL**
- Paper Submission Deadline
 - May 15, 2015
- Student Travel Grants
 - \$10K
- 12 Scheduled Symposia



Conferences - ChinaSIP



- A new SPS **regional conference in China** as a unique outreach platform
 - Help colleagues in China engage with global community
 - Opportunities to network
- **1st ChinaSIP** was launched in July 2013 in Beijing
 - Complemented by summer school, professional development panels & industry panel
 - 180 attendees
- **ChinaSIP 2014**, in Xian
- **ChinaSIP** Technical Interest Groups
 - Provide review workforce and quality assurance for the conf.
 - Facilitate technical community building in China



- July 12-15, 2015 – Chengdu, China
- 414 submissions
- General Chairs
 - Dezhong Yao, University of Electronic Science and Technology of China
 - Yingbo Hua, University of California
- <http://www.chinasip2015.org/index.htm>

Conferences - New Policies

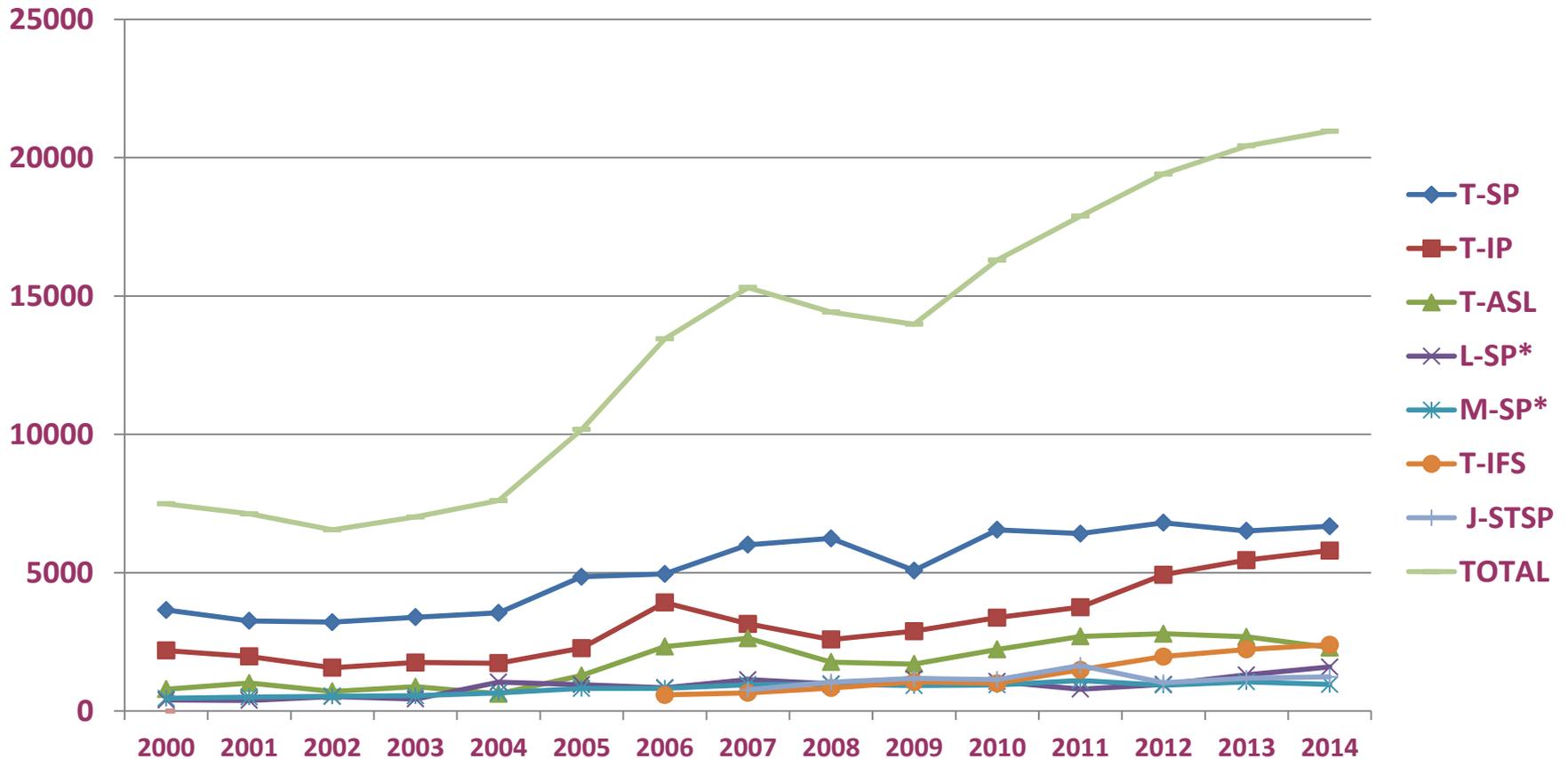
- IEEE Signal Processing Letters published papers can be presented at all SPS owned conferences

Technical Directions

Creation of Special Interest Groups

- Provisional groups that are created to quickly **address emerging technical areas**,
- With a life-span of up to **three** years.
- **subject to a review** by the TC Review Committee to determine to continue, become a TC, or be disbanded.
- The **VP-Technical Directions** shall identify emerging areas and create and receive proposals for Special Interest Groups, with approval by EXCOM.
- Two SIGs created: **Big Data and Internet of Things**

Publications Published Pages (2000-2014)



Publications Impact

	Impact factor	Year 2013 Ranking
Trans. on Medical Imaging	3.8	16
Signal Processing Magazine	4.5	9
Journal of Selected Topics on SP	3.6	19
Trans. on Image Processing	3.1	27
Trans. on Signal Processing	3.2	23
Trans. on Wireless Comm.	2.8	34
Trans. on Mobile Computing	2.9	12 (CS-Info Sys)
Trans. Info Forensics and Security	2.1	58
Trans. on Multimedia	1.8	15 (CS-Software Engr.)
Trans. on Audio/Speech/Lang.	2.6	39
Signal Processing Letters	1.6	88

(Ranking category is electrical and electronic engineering, unless otherwise noted)



New Journals

Financially Co-Sponsored

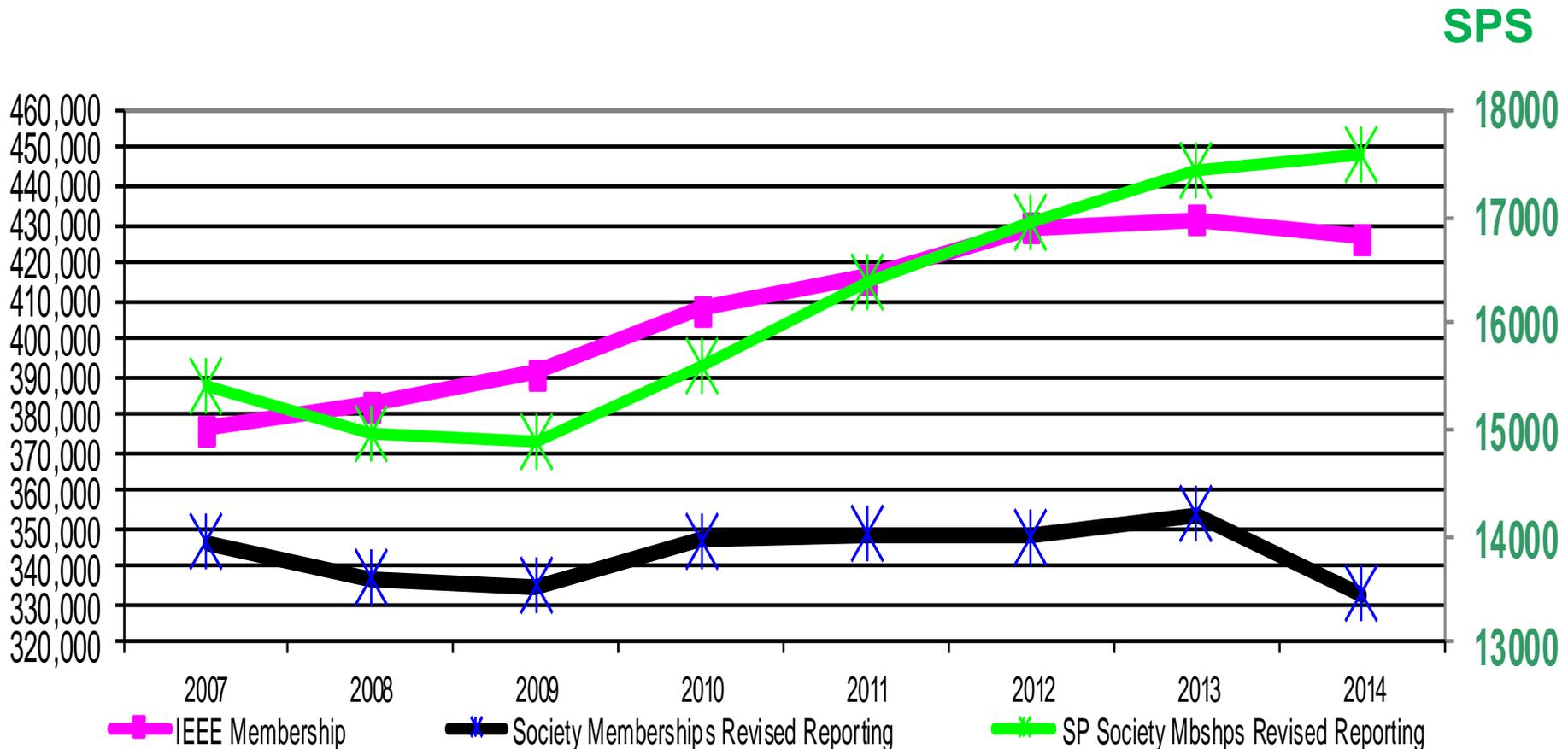
- Trans. on Computational Imaging (70%)
- Trans. on Signal & Information Processing over Networks (70%)
- Journal of Biomedical Health & Informatics (15%)
- Trans. Cognitive Communications and Networking (20%)
- Trans. on Big Data (7.5%)

Technically Co-Sponsored

- Internet of Things Journal
- Trans. on Affective Computing
- Life Science Letters
- Trans. on Cloud Computing
- Trans. on Network Science & Engineering
- Trans. on Computational Social Systems
- Trans. on Molecular, Biological, and Multi-Scale Communication
- Cloud Computing Magazine

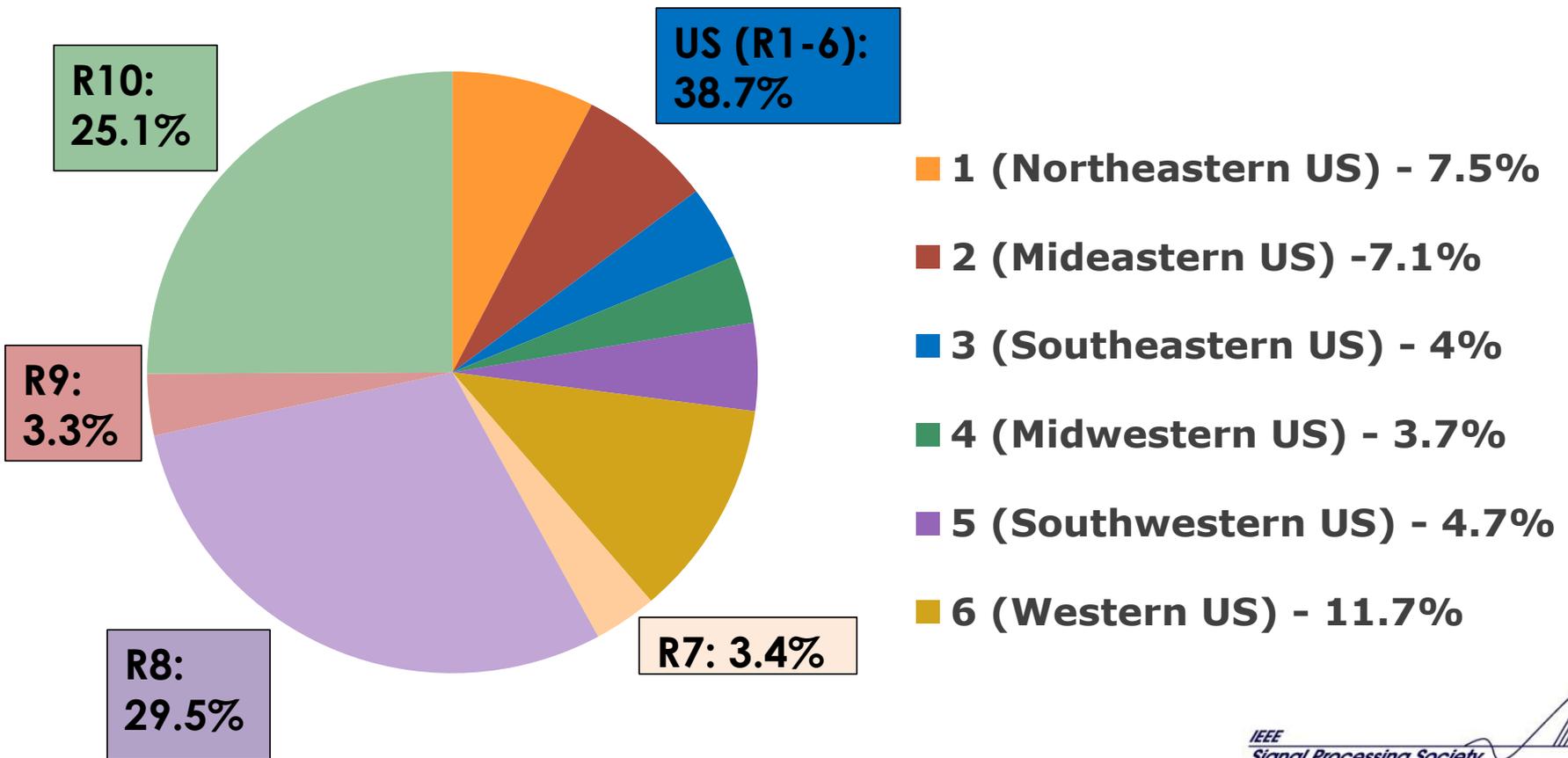
Membership - Long Term Trends

IEEE/Total Society Memberships/SP Society (Dec. 2007-2014)



Membership - By Region

- SPS is fourth largest technical society in the IEEE
- Approximately 17,500 members – Dec 2014



Membership SPS Chapters



There are about 168 SPS chapters worldwide.

Membership – 2014 New Chapters

- **6 New Chapters in 2014:**
 - Chile Chapter
 - Kerala Chapter
 - New Zealand Central Chapter
 - Hindustan Institute of Technology & Science y Student Branch Chapter
 - Methodist College of Engineering & Technology Student Branch Chapter
 - Panimalar Institute of Technology Student Branch Chapter

Membership – 2015 New Chapters

- **15 New Chapters in 2015 (to date):**
 - Central North Carolina Chapter
 - Dayton Chapter
 - Delhi Chapter
 - France Chapter
 - Harbin Chapter
 - Los Alamos/Northern New Mexico Chapter
 - Providence Chapter
 - San Jose State University Student Branch Chapter
 - Indian Institute of Technology-Kharagpur Student Branch Chapter
 - Narsee Monjee Inst of Mgnt/High Studies-Shirpu Student Branch Chapter
 - R. C. Patel Institute of Technology Student Branch Chapter PSNA College of Engineering and Technology Student Branch Chapter
 - Vellore Institute of Technology Student Branch Chapter
 - Vidya Jothi Institute of Technology Student Branch Chapter
 - Vidya Pratishthan's College of Engineering Student Branch Chapter

Membership – Chapter of the Year

- The Chapter of the Year Award is presented annually to a Chapter that has provided their membership with the **highest quality of programs, activities and services**. The award consist of a certificate and a check in the amount of \$1,000 to support local chapter activities.
- **Recipients:**
 - **2014 – Malaysia Chapter**
 - 2013 – Italy Chapter
 - 2012 – Tainan Chapter
 - 2011 - Malaysia Chapter

Membership - Seasonal Schools

- **Main objective** of Seasonal Schools in Signal Processing (**S3P**) Program (established in 2010)
 - Membership development for students with interests in signal processing
 - www.signalprocessingsociety.org/community/seasonal-schools/
- **Upcoming Seasonal Schools:**

Dates	Location	Topics
September 7-11, 2015	Italy	"Summer School on Signal Processing (S3P 2015)"
June 22-26, 2015	Barcelona	"2015 IEEE SPS Summer School on Foundations and Advances in Stochastic Filtering (FASF 2015)"
June 13-19, 2015	Croatia	"2015 IEEE SPS Summer School on Biomedical Image Processing and Analysis (SSBIPA 2015)"

Membership - SigView

- **SigView** (www.sigview.org) is an online video library, which is an open benefit for all SPS members, allowing you to create, host, link and distribute videos of talks, lectures, tutorials or any other media. It puts tutorials created by the world's leading signal processing experts at your fingertips.
- Currently, there are 59 SigViews posted. In March 2015, there were 1144 views, with a total of 3,134 views since the beginning of the year.
- [SigView Chief Editor: John McAllister](#)
- Keeping up-to-date with social media:
 -  IEEE Signal Processing Society Group
 -  www.facebook.com/ieeeSPS
 -  @SPSotl

Company Highlights

Most Viewed

The Fundamentals of Compressive Sensing

Part I: Introduction

Mark A. Davenport

Georgia Institute of Technology
School of Electrical and Computer Engineering

The Fundamentals of Compressive Sensing

Part II: Sensing Matrix Design

Mark A. Davenport

Georgia Institute of Technology
School of Electrical and Computer Engineering

The Fundamentals of Compressive Sensing

Part III: Sparse Signal Recovery

Mark A. Davenport

Georgia Institute of Technology
School of Electrical and Computer Engineering

UNIVERSITY OF CAMBRIDGE

Introducing the Kalman Filter

Dr. Ramsey Faragher

Computer Laboratory

SIMD Programming in VOLK

The Vector-Optimized Library of Kernels

Tym Roneau (troneau@cam.ac.uk)
Nik McCarthy (nmc@cam.ac.uk)
Tim O'Shea (toshea@umd.edu)

A part of the GNU Radio Project

View: Sort By: Date | Title | Popular | Rating

42 titles found.

DSP on Graphs

Author: SPS SigView

Tag(s): ChinaSIP, DSP, (+)

Data, big or small, in social networks, evolutionary dynamics, the world-wide-web, or citation networks are indexed by social agents, individuals of a population, web sites, or authors all very different from time marks or image pixels. The relations among these data are captured by a graph and not as simple as with data samples in traditional time series, speech or audio signals, nor as with color (+)

Last Modified: Oct 24, 2014 | Length: 46 min 10 sec : 32 slides



Most Viewed

- Compressive Sensing I: Introdu... (7538 views)
- Compressive Sensing II: Sensin... (4937 views)
- Compressive Sensing III: Spars... (3161 views)
- Introducing The Kalman Filter (1416 views)
- SIMD Programming In VOLK (994 views)
- Music Information Retrieval (818 views)
- SigView How To: PowerPoint (578 views)
- An Introduction to Signal Expan... (354 views)
- MIMO Detection (291 views)
- Can Signal Classification Speak... (220 views)

Membership - SigPort

- **Signal Processing Repository** – www.trial.sigport.org
 - An online archive of draft manuscripts, reports, student theses, supporting materials and more.
- Provide an **early citable access** to reports that users wish to share with **time-stamp**
 - Complement formal publication in conf./journals with EDICS
 - Authors retain copyright and free to submit for publication
 - Possibly serve as pre-submission to formal publications
 - Moderate fee to ensure sustainable archiving
- **Phase-1 Pilot** development plan is underway
 - SigView Editorial Board approved with Chief Editor Yan Sun
 - Experimental trial launched in late 2014
 - Soft launch 2015

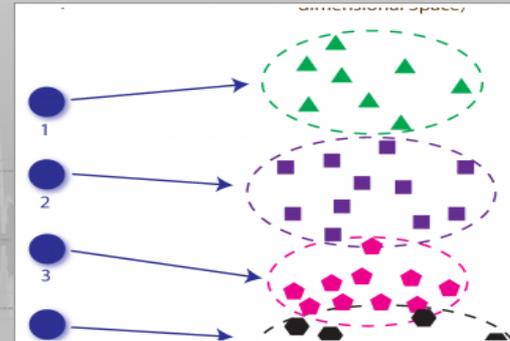
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WELCOME TO SIGPORT

Signal Processing Repository (SigPort) is an online archive of manuscripts, reports, theses, and supporting materials. Created and supported by the [IEEE Signal Processing Society](#) (SPS), SigPort collects technical material of interests to the broad signal processing community. [Learn More »](#)

OVERVIEW POSTER ON ENF RESEARCH FOR MEDIA FORENSICS

This is an overview poster on recent research of using power frequency signatures to determine/verify the time, location and integrity of audio-visual recordings and other sensing data.



- 1
- 2
- 3
- 4
- 5

SIGPORT AUTHORS

SigPort hosts manuscripts, reports, theses, and supporting materials of interests to the broad signal processing community and provide contributors early and broad exposure.

[Submit a Document »](#)

DOCUMENT CATEGORIES

Documents are tagged with types, topic/EDICS areas, and specific keywords.

> [Audio and Acoustic Signal Processing](#)

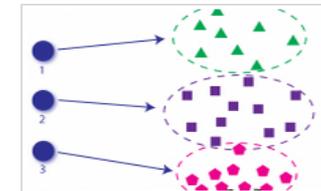
Latest Posts ▾



Coordinated attacks against substations and transmission lines in power grids



On Outage Probability for Two-Way Relay Networks with Stochastic Energy Harvesting



Information Theoretical Limit of Operation Forensics

Membership - Student Services

■ **Student Career Luncheon:**

- A new activity organized for students and companies to meet
- The third Luncheon will be held at ICASSP 2015 on 23 April
- 65 students/fresh graduates and about 27 people from 10 companies registered to attend the event.
- Total sponsorship expected is \$7,400.

■ **IEEE SPS Travel Grants:** The committee is responsible for selecting travel grantees to attend ICASSP, ICIP and GlobalSIP.

<http://www.signalprocessingsociety.org/membership/sps-travel-grants/>

Membership - Student Services

- **“Signal Processing Cup” Competition for Students:**
 - Opportunity for grad & undergrad students to **form teams and work together to solve a challenging and interesting real-world problem using signal processing techniques and methods**. Competition title: Heart Rate Monitoring During Physical Exercise Using Wrist-Type Photoplethysmographic (PPG) Signals.
 - **Sponsored by MathWorks with cash and software!**
 - **Second event is scheduled for ICASSP 2015 on 20 April.**
 - **The number of teams registered was 66, of which, 49 teams submitted their work for the competition. Three teams were selected for the final competition at ICASSP '15.**

WIKI Project

- Wikipedia has become one of the most widely-used resources on signal processing
 - Nyquist–Shannon sampling theorem page **is viewed on average 1000x a day**
 - Editing of a Wikipedia article can easily exceed the impact and visibility of writing a paper
- **Wikipedia Information**
 - http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Signal_Processing
 - Under “Signal Processing”, there are 286 pages and 18 categories.
 - Under those 18 main categories, there are 1,228 pages and another 64 categories.
 - Under those 64 categories, there are another 3447 pages and 294 categories.

Awards - SPS

- **IEEE Jack S. Kilby Signal Processing Medal (est. 1995)**
- **IEEE James A. Flanagan Speech and Audio Processing Technical Field Award (est. 2002)**
- **IEEE W.R.G. Baker Prize Paper Award (reinstated 2011)**
- **IEEE Fourier Award for Signal Processing (newly approved)**

- **Society Award**
- **Technical Achievement Award**
- **Education Award**
- **Meritorious Service Award**
- **Best Paper Award**
- **Overview Paper Award (newly approved)**
- **Signal Processing Letters Best Paper Award (newly approved)**
- **Signal Processing Magazine Best Paper Award**
- **Signal Processing Magazine Best Column Award**
- **Sustained Impact Paper Award (newly approved)**
- **Young Author Best Paper Award**

Finance - SPS Budget

	2011 Actuals	2012 Actuals	2013 Actuals	2014P Actuals	2015 Budget
Publications Revenue	\$3,940.9	\$4,292.1	\$4,438.5	\$4,046.4	3,972.5
Conferences Revenue	\$4,748.4	\$4,252.2	\$5,541.7	\$4,843.4	\$5,229.3
Society Dues Revenue	\$360.9	\$410.9	\$392.0	\$384.5	\$386.7
Total Revenue	\$9,050.2	\$8,956.6	\$10,372.2	\$9,275.2	\$9,558.5
Total Expenses	\$8,847.9	\$8,832.8	\$9,460.7	\$8,455.1	\$9,527.8
Net	(\$1,228.9)	\$1,222.4	\$2,743.5	\$820.2	\$60.7
<i>Investments</i>	(\$1,431.1)	\$1,098.7	\$3,474.3		
<i>Reserves</i>	\$14,180	\$15,650	\$19,934		

Volunteering Opportunities

- Review papers for journals/conferences
- Become part of the editorial boards
(appointed by Journal's editors-in-chief; vetted by Pub Bd)
- Organize conferences and seasonal schools
- Propose tutorials for online education program
- Get involved in technical committees
 - Practically any SPS member and even some non-members can become Affiliate Members (non-elected, non-voting members) of a particular TC
- Volunteer for elected leadership positions
- (more)

Where to Find This Talk?

- Go to IEEE Signal Processing Society at <http://www.signalprocessingsociety.org/>
 - Under “About SPS”, see “State of the Society”
 - Additional slides at end provide more information

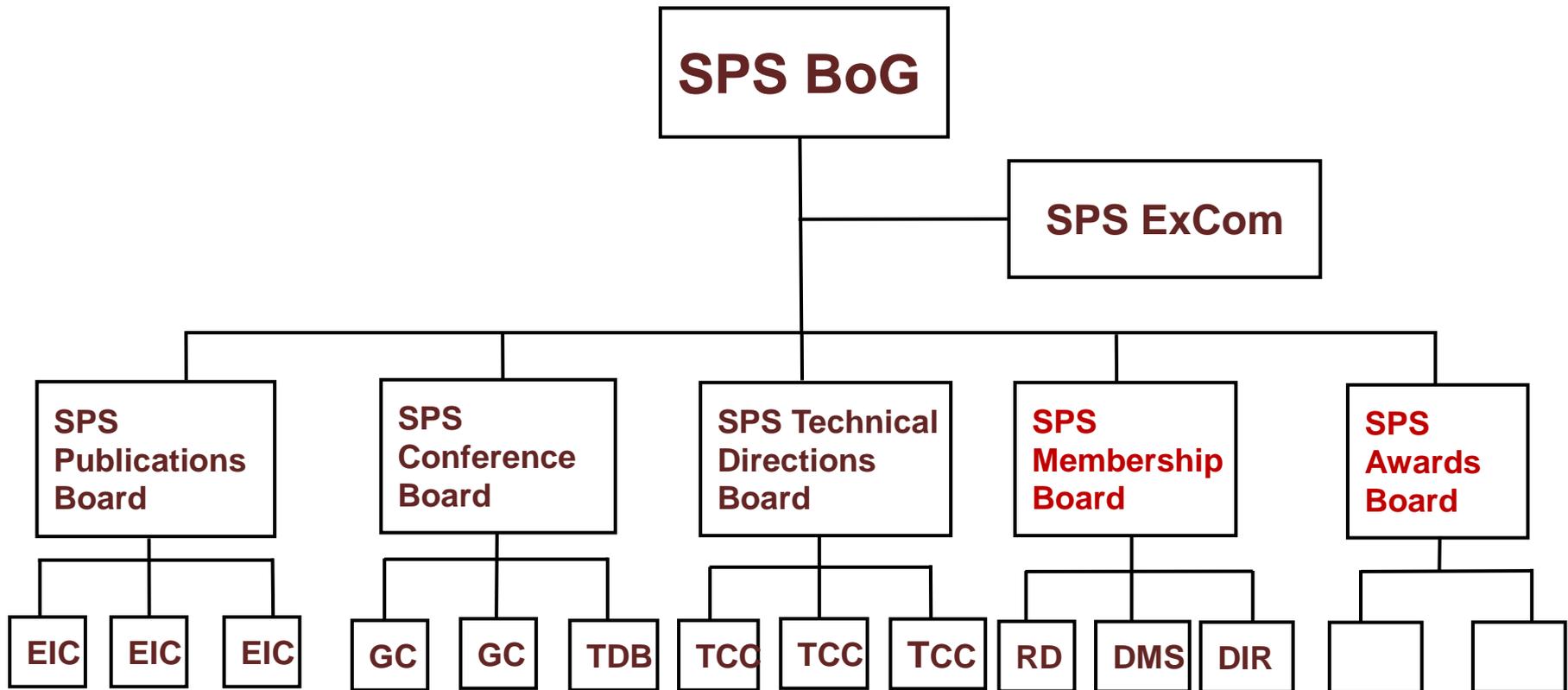
What Can We Do for You?

- **President:** Alex Acero
- **President-Elect:** Rabab Ward
- **Vice President-Membership:** Kostas Plataniotis
- **Vice President-Conferences:** Carlo Regazzoni
- **Vice President-Publications:** Thrasyvoulos N. Pappas
- **Vice President-Technical Directions:** Charles Bouman



Additional Information

IEEE Signal Processing Society (SPS) Organizational View



Organization

Newly Elected in Leadership

- Vice President–Conferences:
Carlo Regazzoni
University of Genova
- Vice President-Publications:
Thrasyvoulos N. Pappas
Northwestern University



Recent Organizational Changes

- **Separation of Membership and Award Boards**
 - New Vice President–Membership
 - New Award Board Chair: a non-voting BoG member

- **President-Elect will be Society Treasurer from 2015**
 - Will replace the position of Vice President-Finance

- **New election process for President-Elect:**
 - Presentation of candidates, discussion, and vote during annual BoG meeting at ICASSP

Awards - Update

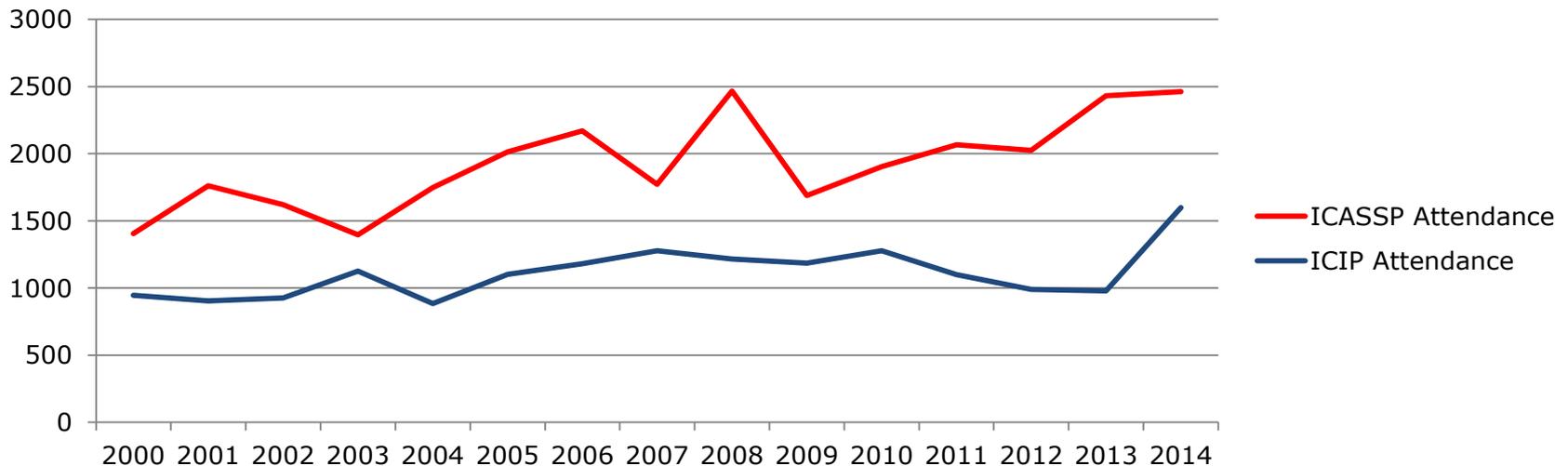
- Change of award nomination process
 - Accept nominations from all boards, committees, and individuals
 - Creation of new policies concerning award nominations process
- Change of award selection process – Awards Board will vet on all nominations
- No board/committee can nominate its own members in order to minimize potential conflict of interests ...

Awards - SPS

New Society Awards with an Industry focus:

- **Industrial Leader Award** (under TAB review)
- **Industrial Innovation Award** (under TAB review)
- **Conference Best Paper Award for Industry** (under TAB review)

ICASSP and ICIP Attendance



Year	ICASSP Locations	ICIP Locations
2000	Istanbul, Turkey	Vancouver, Canada
2001	Salt Lake City, UT	Thessaloniki, Greece
2002	Orlando, FL	Rochester, NY
2003	Hong Kong	Barcelona, Spain
2004	Montreal, Canada	Singapore
2005	Philadelphia, PA	Genova, Italy
2006	Toulouse, France	Atlanta, GA
2007	Honolulu, Hawaii	San Antonio, TX
2008	Las Vegas, NV	San Deigo, CA
2009	Taipei, Taiwan	Cairo, Egypt
2010	Dallas, Texas	Hong Kong
2011	Prague, Czech Republic	Brussels
2012	Kyoto, Japan	Orlando, FL
2013	Vancouver, BC, Canada	Melbourne, Australia
2014	Florence, Italy	Paris, France

SPS Publications: Page Budgets

Year	Pages
1967	202
1970	527
1980	773
1990	2,200
2000	3,652
2009	5,080
2014	6,678

Trans. on Audio →
 Trans. Audio & Electroacoustics →
 T-ASSP → T-SP

Approximately 21,000 pages were published in 2014!

Other SPS Pubs in 2014	Pages
Trans. on Audio, Speech and Lang. Proc. (since 1993)	2,296
Trans. on Image Proc. (since 1992)	5,803
Trans. on Info. Forensics and Security (since 2006)	2,396
SP Letters (since 1994)	1,590
Journal of Selected Topics in SP (since 2007)	1,236
SP Magazine (since 1984)	911

Portfolio: Financially Co-Sponsored

- New: Trans. on Computational Imaging (70%)
- New: Trans. on Signal & Information Processing over Networks (70%)
- Trans. Multimedia (SPS managed, 50%)
- Trans. Medical Imaging (35%)
- Trans. Mobile Computing (25%)
- Trans. Wireless Communications (% varies by subscriptions)
- Wireless Communications Letters (30%)
- Biometrics Compendium (% varies by content)
- Journal of Biomedical Health & Informatics (15%)
- Trans. Cognitive Communications and Networking (20%)
- Trans on Big Data (7.5%)

Portfolio: Technically Co-Sponsored

■ Journals

- Internet of Things Journal
- Reviews in Biomedical Engineering
- Sensors Journal
- Trans. on Affective Computing
- Trans. on Smart Grid
- Life Science Letters
- Trans on Cloud Computing
- Trans on Network Science & Engineering
- Trans. Computational Social Systems
- Trans. Molecular, Biological, and Multi-Scale Communications

■ Magazines

- Multimedia Magazine
- Computing in Science & Engineering Magazine
- Security & Privacy Magazine
- Cloud Computing Magazine

Technical Committees: Then and Now

Year 1976

- Digital signal processing
- Digital measurement of noise
- Electroacoustic transducers
- Speech processing
- Underwater acoustics

Year 1987

- Audio and electroacoustics
- Digital signal processing
- Multidimensional signal processing
- Spectral estimation and modeling
- Speech processing
- Underwater acoustics
- VLSI for signal processing

→ Evolved and Broadened Scope of Signal Processing

Year 2013

- Audio and electroacoustics
- Bio imaging and signal processing
- Design and implementation of signal processing and systems
- Image, video, and multidimensional signal processing
- Information forensics and security
- Machine learning for SP
- Multimedia SP
- Sensor array and multichannel
- SP for communication and networking
- SP theory and methods
- Speech and language processing

- Industry DSP technology
- Signal processing education – moved under Membership Board

TCs and Affiliated Community

TC	ICASSP 2014 Submissions	ICASSP % of Submissions	Affiliates	Affi (%)	Affi/Sub
AASP	346	10.0%	92	6.5%	0.65
BISP	206	5.9%	63	4.5%	0.76
DISPS	98	2.9%	74	5.3%	1.83
IFS	123	3.5%	151	10.7%	3.06
IVMSP	442	12.7%	160	11.4%	0.90
IDSP	98	2.9%	12	.8%	0.28
MMSP	86	2.5%	159	11.3%	4.52
MLSP	210	6.1%	108	7.7%	1.26
SAM	222	6.4%	105	7.5%	1.17
SL	695	20.0%	191	13.6%	0.68
SPCOM	391	11.3%	190	13.5%	1.19
SPTM	550	15.8%	102	7.2%	0.46
Total	3476		1407		

Completed Seasonal Schools

Dates	Location	Topics
Dec. 20-23, 2014	India	"SPS- PSIPA Winter School on Machine Intelligence and Signal Processing (MISP 2014)"
Dec. 16-19, 2014	Singapore	"2014 IEEE SPS Winter School on Visual Image Search and Visual Analytics (VISVA 2014)"
Aug. 26-29, 2014	Taiwan	"IEEE Signal Processing Society Summer School on Internet of Things and Machine-to-Machine Systems"
Aug. 4-16, 2014	Romania	"Intensive Program on Computer Vision"
Jul. 29 -Aug. 1 2014	Canada	"IEEE Signal Processing Society Summer School on Signal Processing and Machine Learning for Big Data"
Jul. 7-11, 2014	Italy	"Second IEEE SPS Italy Chapter Summer School on Signal Processing"
June 8-14, 2013	Croatia	"Biomedical Image Processing and Analysis"
Sept. 3-6, 2012	Turkey	"Game Audio"
Aug. 20-24, 2012	UK	"High Performance DSP & FPGA implementation of SP Systems"
July 2-6, 2012	Australia	"Social Media Processing"
July 2-6, 2012	Taiwan	"Compressive Sensing and MIMO Signal Proc. Systems"
Jan. 16-20, 2012	Greece	"Speech and Audio Processing for Immersive Environments and Future Interfaces"
Sept. 3-7, 2011	Austria	"Networked Embedded Systems"
July 4-8, 2011	Taiwan	"3D & High Definition/High Contrast Video Proc. Systems"
Aug.30-Sept. 3 2010	Netherlands	"Models for Embedded Signal Processing Systems"

The Big Five IEEE Societies

	Members	Undergrad Students	All (with Affiliates)
Computer	46,502	3,818	66,162
ComSoc	43,253	4,867	49,163
Power	29,881	3,189	33,391
SPS	16,740	634	17,538
Microwave	11,531	2,050	12,694

- Reversed the downward trend and started to grow!
- SPS is the largest society without its own division!

(Dec 2014 data)



Industrial Relations

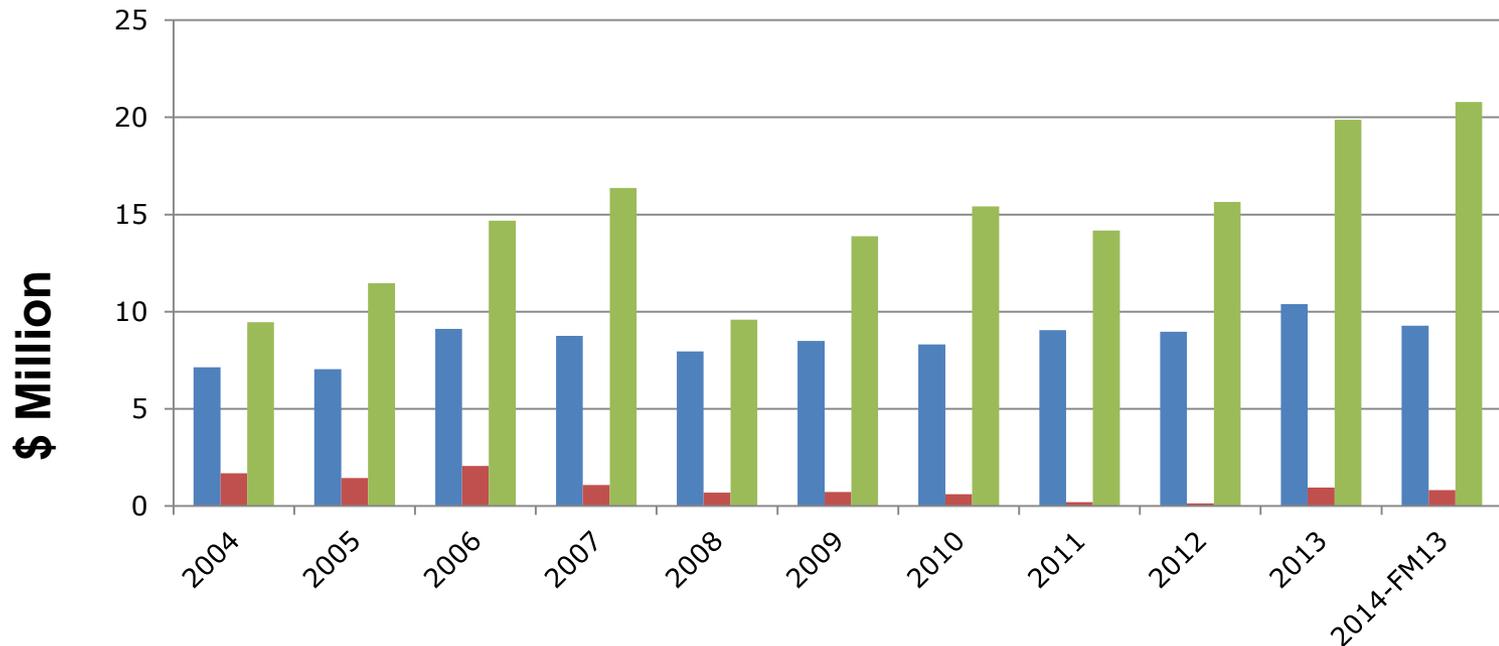
■ **Ambassador Program**

- identifying ambassadors representing each company
- to establish programs, courses, and events that are of value to the companies
- In 2013, a LinkedIn page was created and currently, the program has 30 ambassadors

■ **Emerging Signal Processing Applications (ESPA) Conference**

- Held in 2012
- Consider to hold again at GlobalSIP 2016

SPS Budget and Finance



Operation Revenue	7.13	7.04	9.11	8.75	7.96	8.49	8.32	9.05	8.96	10.17
Operation Surplus	1.68	1.44	2.06	1.08	0.683	0.723	0.608	0.202	0.124	0.958
Reserves	9.46	11.47	14.68	16.37	9.59	13.89	15.41	14.18	15.65	19.88

Awareness/Visibility

- EXCOM formed a SP Awareness Committee consists of EXCOM members and some invited guests, chaired by President.
- Conference calls in conjunction with ExCom meetings.
- Hired PR Firm: Stern + Associates to support Visibility campaign.
- Interested in supporting visibility activities, email: sp.info@ieee.org

Challenges Ahead

- **Publications**
 - Reducing revenues due to IEL distribution
 - Further improve quality, impact factors
- **Membership**
 - Create more values and benefits
 - Outreach to emerging regions
- **Finance**
 - More services and programs – more expenses!
 - Create more new products and models?

Challenges Ahead

- **Conferences:**
 - How to support regional activities?
 - Balance between US and international
 - Industry Participation
- **Technical Activities:**
 - Build a strong sense of community in TCs
 - Timely embrace new emerging topics
- **Society:**
 - **Awareness/Visibility in the public at large**

Foresee the future and position ahead!