

# EIC REPORT – June 2009

RECOLLECTIONS FROM  
IEEE JUNE 2009 PANEL  
OF TECHNICAL EDITORS

# Sundry items

- **Sub-to-pub comprehensive reports**  
(including journals not using MC)  
due for Q3 2009)
- **Posting articles on Xplore before**  
print saves 4 to 6 weeks
- **Authors satisfaction survey**  
(CompSoc & ComSoc)
  - 2672 responses
  - authors overwhelmingly satisfied
  - major sources of dissatisfaction:
    - sub-to-pub time
    - time for review

## Sundry items

- 2010: New look and feel for Xplore
- Mobile version of Xplore (June 2009)  
Beta version accessible at  
<http://xplqa.ieee.org/ieeemobile/>
- Most accessed journals in Xplore:  
T-ITs rank 6<sup>th</sup>

|   |                  |
|---|------------------|
| <b>Solid-State Circuits, IEEE Journal of</b>          | <b>1,421,901</b> |
| Microwave Theory and Techniques, IEEE Transactions on | 932,259          |
| Antennas and Propagation, IEEE Transactions on        | 863,351          |
| Magnetics, IEEE Transactions on                       | 860,534          |
| Electron Devices, IEEE Transactions on                | 792,964          |
| Information Theory, IEEE Transactions on              | 779,305          |
| Signal Processing, IEEE Transactions on               | 725,277          |
| Proceedings of the IEEE                               | 696,627          |
| Automatic Control, IEEE Transactions on               | 660,476          |
| Power Systems, IEEE Transactions on                   | 645,339          |



# Sundry items

• *Plagiarism detection tools* available soon (to be integrated into existing manuscript submission systems):

- Compare submitted material to a vast database of material published in the scientific/technical fields
- Return a report that shows percentages of the same material found in the submitted manuscript and other published documents, with highlighted text to show verbatim passages

# STATUS OF THE IT TRANSACTIONS

## ► editorial board, June 2009

### IEEE TRANSACTIONS ON INFORMATION THEORY

**EZIO BIGLIERI**, *Editor-in-Chief*

**CYRIL MÉASSON**, *Publications Editor*

**PREDRAG SPASOJEVIĆ**, *Publications Editor*

**JOHN B. ANDERSON**  
*Book Reviews*

**RANDALL BERRY**  
*Communication Networks*

**MARIO BLAUM**  
*Coding Theory*

**HELMUT BÖLCSKEI**  
*Detection and Estimation*

**ILYA DUMER**  
*Coding Theory*

**URI EREZ**  
*Coding Techniques*

**ELZA ERKIP**  
*Shannon Theory*

**TUVI ETZION**  
*Coding Theory*

**TORU FUJIWARA**  
*Complexity and Cryptography*

**MICHAEL GASTPAR**  
*Shannon Theory*

**ANDREA J. GOLDSMITH**  
*Communications*

**ALEX GRANT**  
*Communications*

**PATRICK HAYDEN**  
*Quantum Information Theory*

**FRANZ HLAWATSCH**  
*Detection and Estimation*

**IOANNIS KONTOYIANNIS**  
*Shannon Theory*

**GERHARD KRAMER**  
*Shannon Theory*

**ADAM KRZYŻAK**  
*Pattern Recognition,  
Statistical Learning, and Inference*

**AMOS LAPIDOTH**  
*Shannon Theory*

**HANS-ANDREA LOELIGER**  
*Coding Techniques*

**MARCO LOPS**  
*Detection and Estimation*

**KEITH MARTIN**  
*Complexity and Cryptography*

**URBASHI MITRA**  
*At Large*

**ARIS L. MOUSTAKAS**  
*Communications*

**ARIA NOSRATINIA**  
*Communication Networks*

**ERIK ORDENTLICH**  
*Source Coding*

**MATTHEW G. PARKER**  
*Sequences*

**SUNDAR RAJAN**  
*Coding Theory*

**JUSTIN ROMBERG**  
*Signal Processing*

**REIHANEH SAFAVI-NAINI**  
*Complexity and Cryptography*

**IGAL SASON**  
*Coding Theory*

**GADIEL SEROUSSI**  
*Coding Theory*

**ERCHIN SERPEDIN**  
*Signal Processing*

**GIORGIO TARICCO**  
*Communications*

**LUDO TOLHUIZEN**  
*Coding Theory*

**LANG TONG**  
*Detection and Estimation*

**SENNUR ULUKUS**  
*Communication Networks*

**ADRIAAN J. VAN WIJNGAARDEN**  
*Communications*

**EMANUELE VITERBO**  
*Coding Techniques*

**HIROSUKE YAMAMOTO**  
*Shannon Theory*

**EN-HUI YANG**  
*Source Coding*

**NAM YUL YU**  
*Sequences*

**ROY D. YATES**  
*Communication Networks*

**LIZHONG ZHENG**  
*Communications*

+ Motani, Franceschetti, Jafar

43 + 3 = 46 Associate Editors (were 26 in June 2007)

| area                | papers                     | months                      | 30-day load                                  | active                     |
|---------------------|----------------------------|-----------------------------|--|----------------------------|
| coding              | 95,59,7,91,<br>39,61,79,70 | 33,19,2,35,<br>16, 16,34,34 | 2.9,3.0,2.8,2.6,<br>2.3, <b>3.6</b> ,2.3,2.1 | 43,25,7,20,<br>19,32,32,14 |
| communications      | 80,62,2,<br>43,24,40       | 33,31,3,<br>16,11,14        | 2.4,1.9,0.6,<br>2.6,2.1,2.7                  | 39,13,2,<br>23,21,31       |
| networks            | 52,3,51,<br>65,10          | 16,1,16,<br>21,3            | <b>3.1</b> ,2.7,3.0,<br>3.0,2.8              | 44,2,34,<br>51,10          |
| cryptography        | 71,38,38                   | 21,11,11                    | <b>3.2,3.2,3.2</b>                           | 42,10,17                   |
| detection & estim.  | 76,27,7,66                 | 24,11,3,33                  | <b>3.1</b> ,2.3,1.9,2.0                      | 24,12,7,20                 |
| pattern recognition | 75                         | 26                          | 2.8  | 21                         |
| quantum IT          | 37                         | 11                          | <b>3.2</b>                                   | 21                         |
| sequences           | 17,16                      | 6,6                         | 2.6, <b>3.1</b>                              | 12,17                      |
| Shannon theory      | 19,46,43,<br>5,66          | 6,11,19,<br>2,24            | <b>3.1,3.9</b> ,2.2,<br>2.0,2.7              | 17,45,18,<br>4,22          |
| source coding       | 55,40                      | 21,19                       | 2.5,2.0                                      | 29,24                      |
| at large            | 66                         | 25                          | 2.5  | 24                         |
| signal processing   | 44,8                       | 14,2                        | 3.0, <b>3.2</b>                              | 8                          |

## New associate editors to be appointed

- Mehu1 Motani, Singapore (Comm. Networks)
- Amos Lapidoth, ETHZ (Shannon Theory)
- Massimo Franceschetti, UCSD (Comm. Networks)
- Syed Ali Jafar, UCI (Communications)

# PRODUCTION REPORT, 2009

| month     | pages | mailing date |
|-----------|-------|--------------|
| Jan 2009  | 476   | Dec 29, 2008 |
| Feb 2009  | 452   | Feb 12, 2009 |
| Mar 2009  | 516   | Feb 27, 2009 |
| Apr 2009  | 512   | Mar 18, 2009 |
| May 2009  | 488   | Apr 22, 2009 |
| June 2009 | 488   | May 20, 2009 |
| July 2009 | 508   |              |

## ***PAGE COUNT***

**2008: 5848**

**2009 (projected): 5897**

## ▶ Submission data

- Papers submitted, January to December 2007: 940
- Papers submitted, January to December 2008: 984
- Papers submitted, January to December 2009: 1075 (projected)

# ► Special issue, scheduled December 2009



## IEEE Information Theory Society

### *CALL FOR PAPERS: Special Issue of the IEEE Transactions on Information Theory on Molecular Biology and Neuroscience*

Recently, information theory has gained significant attention in various areas of life sciences, most prominently in bioinformatics, computational molecular biology, and neuroscience. But despite the fact that information theoretic methods were successfully employed for predicting the correlation between DNA mutations and disease, identifying protein binding sequences in nucleic acids, analyzing neural spike trains and higher functionalities of cognitive systems, many more problems at the interface of information theory and biology remain unsolved.

In order to address such problems – including quantifying the information content of shapes, complex patterns, and self-organizing networks, determining spatio-temporal firing codes of neurons, and formalizing the notion of information context – new information-theoretic techniques and analytical frameworks are required.

As natural sciences are becoming more diverse with respect to their number of fields and specialities, a paradigm of union and cooperation between these fields and information theory would represent a major breakthrough. Information theory has the potential to galvanize the field of bioinformatics and biomedical sciences, and these two disciplines can bolster each other towards new insight and discoveries.

The goals of the special issue are to provide the reader with an overview of the most important problems in molecular biology and neuroscience, the state of the art applications of information theory in this field, and to compile a collection of new research results on this subject. The special issue will consist of a mixture of invited and contributed papers. In the former case, leading experts in the area of bioinformatics and neuroscience will be invited to provide the interested reader with comprehensive, yet highly approachable introductions to the biological fields of interest. In the latter case, possible topics for the special issue include, but are not limited to:

- Statistical and information-theoretic analysis of DNA and protein sequences, DNA and protein sequence compression, Motif finding, DNA sequencing, and tandem mass spectrometry data analysis.
- Coding theoretic problems in design and analysis of DNA, CGH, SNP, and tissue microarrays. Modeling and analysis of gene regulatory networks, small-sample gene expression classification and clustering.
- Evolutionary and genomic distance measures, Channel models for DNA mutations and information transfer.
- New information-theoretic measures for analyzing shapes, complex networks, and spatio-temporal maps.
- Information embedded in timing and neuron spiking activity analysis.
- Control and information transfer in sensory systems.

#### IMPORTANT DATES

Paper proposal submission deadline: November 1<sup>st</sup>, 2008

Paper submission deadline: January 2009

Completion of first round of reviews: April 2009

Final review and selection of papers: August 2009

Final manuscripts to IEEE: October 2009

Publication of the Special Issue: December 2009

#### INSTRUCTIONS FOR MANUSCRIPT PREPARATION:

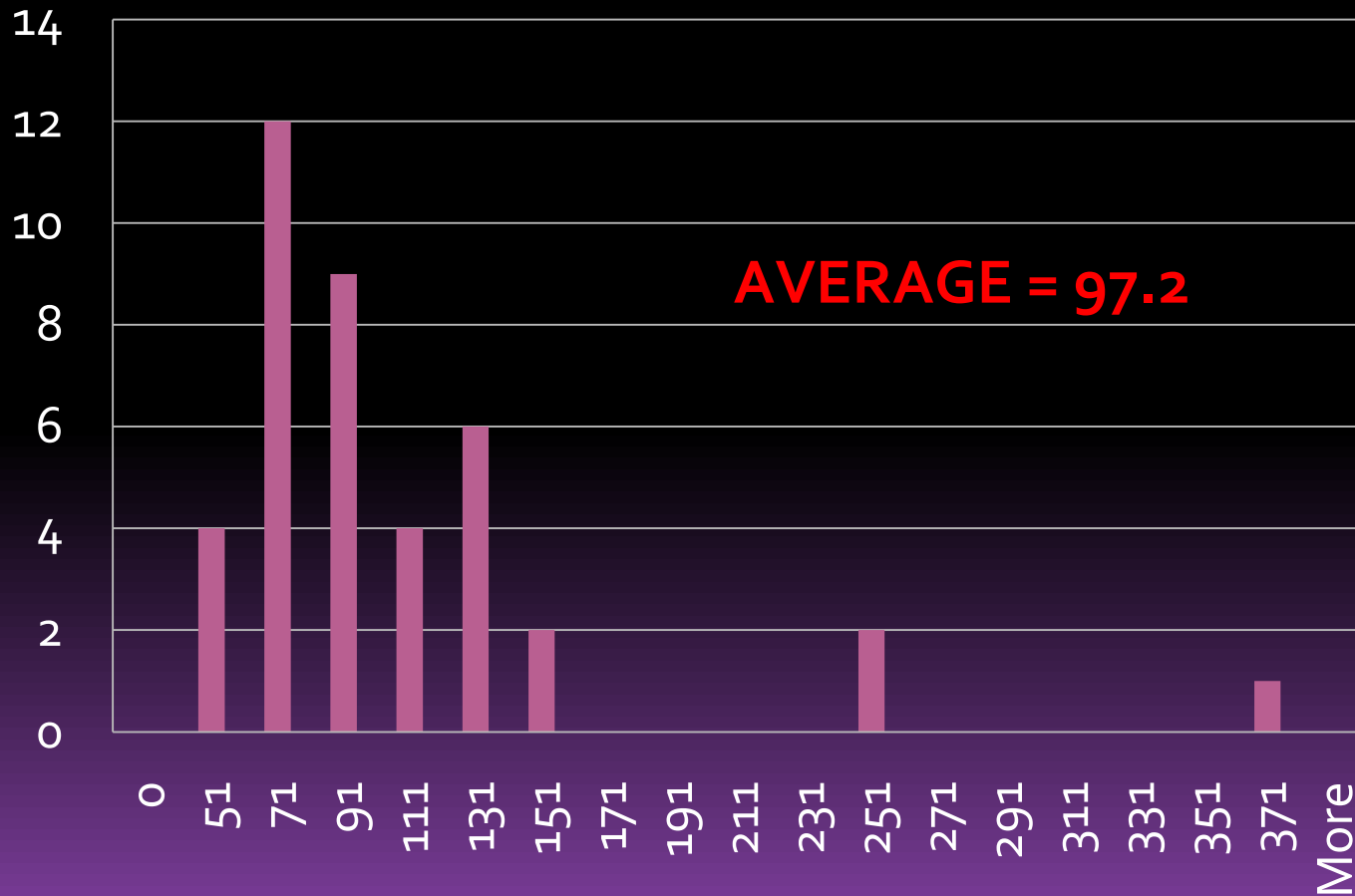
In order to ensure the highest quality of published papers, authors will be asked to submit first a paper proposal, not exceeding 5 pages in length. The proposals will be reviewed by experts in life science and information theory, and only those papers deemed relevant to both areas will be accepted for review.

#### GUEST EDITORS (IN ALPHABETICAL ORDER)

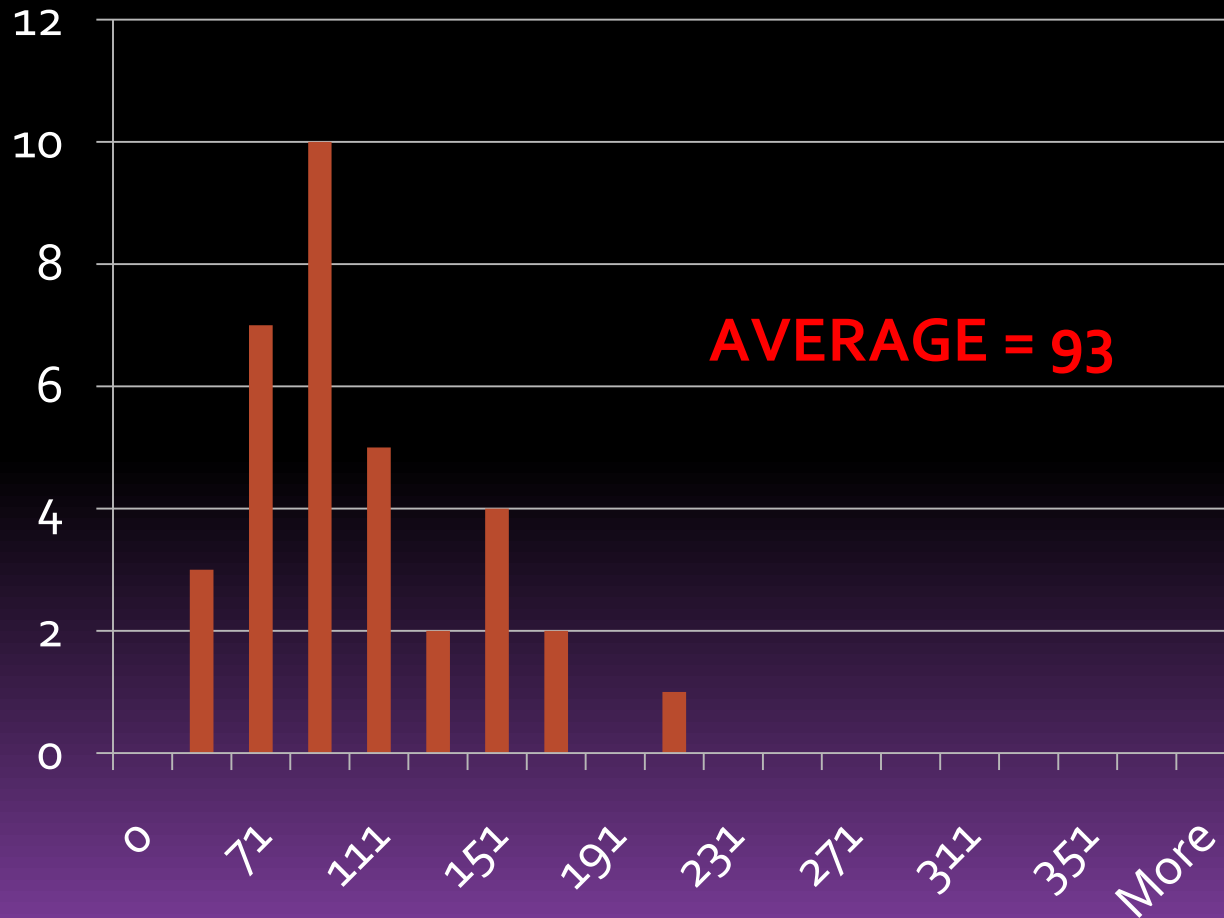
- Gil Alterovitz, Harvard Medical School/Massachusetts Institute of Technology
- Gerard Battail, Ecole Nationale Supérieure des Télécommunications, Paris
- Todd P. Coleman, Sean Moya, Olgica Milenkovic, and Nathan Price, University of Illinois at Urbana-Champaign
- Joachim Hagenauer, Technisches Universität München
- Marco Ramoni, Harvard Medical School
- Ilya Shmulevich, Institute for Systems Biology, University of Washington, Seattle
- Wojciech Szpankowski, Purdue University

- GUEST EIC: Olgica Milenkovic
- 40 pre-submissions
- 28 submitted after first screening

# ▶ Sub-to-Pub data (January 2009)



# ▶ Sub-to-Pub data (July 2009)



## ▶ From Pareja to “Manuscript Central”

Ad hoc committee appointed to organize the transition:

- Alex Grant
- Adriaan J. van Wijngaarden

in collaboration with Kevin Quirk and Sonal Parikh (IEEE)

# AN UNIMPLEMENTED RECOMMENDATION

## **2005 Report of the Ad Hoc Committee on Transactions Growth -- Recommendation unimplemented:**

*The general idea of this approach is to split the Editorial Board. The Editorial Board could be organized into two or more different thematic areas, with a Sub-Editor-in-Chief appointed for each of these areas.*

*The table of contents of the TRANSACTIONS could be then organized accordingly, with a separate heading for each area. The EiC would remain the single person in charge of the entire TRANSACTIONS.*

*There are several good journals that already operate in this mode, in both engineering and mathematical literature (e.g., IEEE Transactions on Communications, Mathematics of Operations Research, Electronic Journal of Combinatorics).*

*Such hierarchical structure of the Editorial Board can provide some of the benefits that a split of the TRANSACTIONS would achieve. In particular, the EiC would no longer be alone in selecting Associate Editors, assigning papers, dealing with disputes, etc. Given the specialized expertise of the Sub-Editors-in-Chief in their respective areas, quality will be easier to maintain.*

*Partition of the table of contents into sub-areas will make it easier for individual readers to locate technical content and/or important contributions that are of relevance for them.*