

Towards a federated SODA

SODA: a healthy conference

- 20+ year tradition
- 500+ submissions
- 200+ accepted papers in 30+ sessions
- 2-3 plenary talks
- recognized by most as first-rate algorithms conference

Room for improvement?

- overworked and oversized PC
- below critical mass in some key areas
- could use more plenary talks
- labelled by some as second-rate theory conference
- no room for expansion without structural change

A specific proposal

Partition submissions into 6 themes, guided by existing content.
Develop independent PCs for each theme.

↑
including
ALENEX/ANALCO

Theme choice needs discussion

- Able
- Baker
- Charlie
- ...
- [your area goes here]

Primary motivations

- better distribute decision-making
- increase chances that all papers are read by qualified experts
- reduce workload for individual PC members
- allow for modest expansion

A red herring

“It’s much too difficult to define a half-dozen themes for SODA content”

Maybe true, but maybe easier than using an unlimited of themes.

Case in point: do these 40 themes adequately describe SODA content?

- Algebra
- Combinatorial Structures
- Discrete Optimization
- Discrete Probability
- Finite Metric Spaces
- Graph Theory
- Mathematical Programming
- Number Theory
- Random Structures
- Topological Problems
- Algorithm Analysis and Complexity
- Algorithmic Game Theory
- Algorithmic Mechanism Design
- Combinatorial Scientific Computing
- Communication Networks
- Computational Geometry
- Computer Graphics and Computer Vision
- Computer Systems
- Cryptography
- Computer Security
- Data Compression
- Data Structures
- Databases and Information Retrieval
- Distributed and Parallel Computing
- Experimental Algorithmics
- Graph Algorithms
- Internet and Network Algorithms
- Machine Learning
- On-line Problems
- Quantum Computing
- Pattern Matching
- Robotics
- Scheduling and Resource Allocation Problems
- Symbolic Computation
- Bioinformatics
- Economics
- Finance
- Manufacturing
- Physics
- Sociology

Current SODA PC "management"

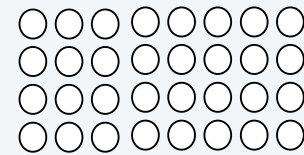
- SODA SC (appointed)



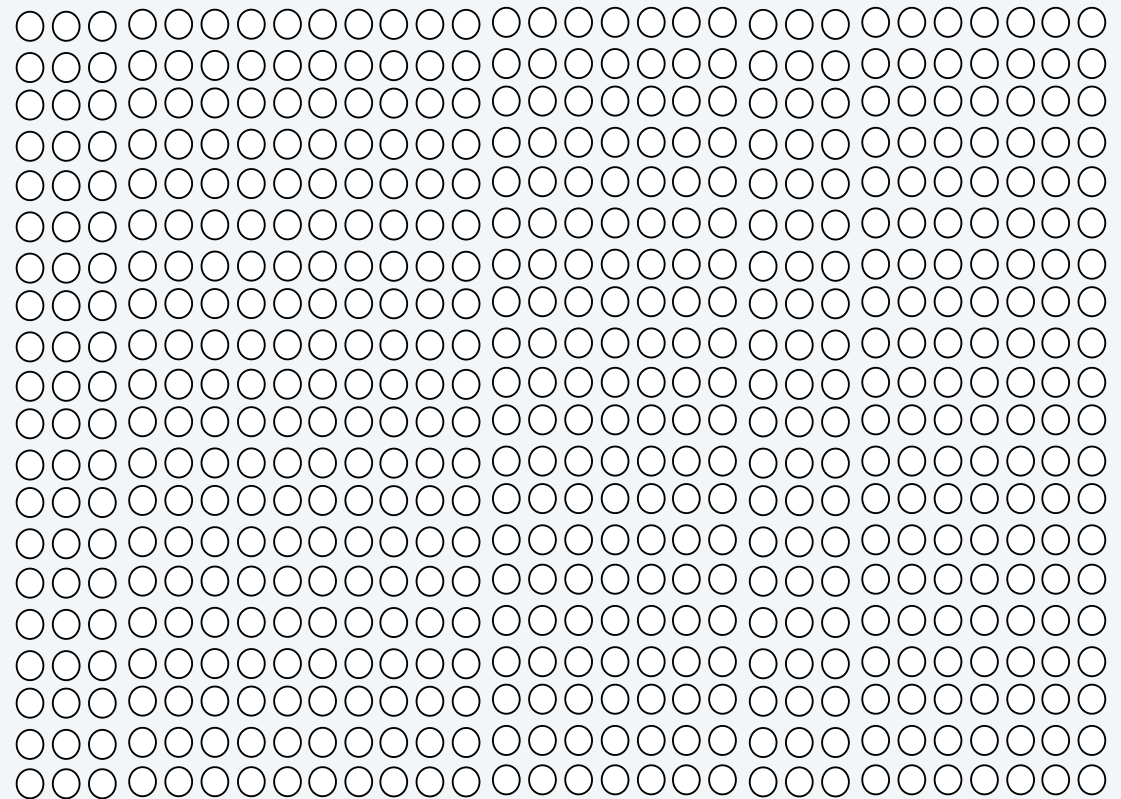
- PC chair



- PC



- "external" reviewers



Managing a federated SODA

Example 1:

- SODA SC = track SC chairs



- SC for each theme



- PC for each theme







Properties of a theme

- SC + PC “defines” theme, as in small conferences
- standing SC chooses PC each year
- expect 50-150 submissions, 15-50 accepts
- PC sufficiently large that each paper is read by 2-3 experts
- SC+PC might select plenary lecturers in alternate years

Managing a federated SODA

Example 2:

- SODA SC = current + 2 past PC chairs + 2 elected 
- SODA PC chair 
- theme PC chairs 
- theme PCs 

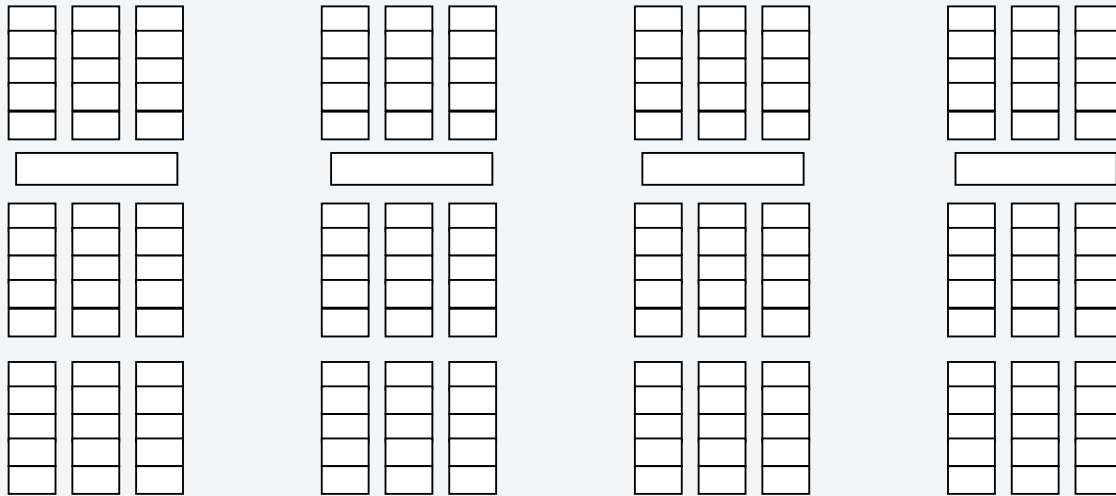
Properties of a theme

- PC “defines” theme, as in small conferences
- general chair chooses PC chairs each year
- expect 50-150 submissions, 15-50 accepts
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Scheduling

Desiderata

- 4 days, 36 sessions, 4 plenary lectures
- sessions organized by content, not track
- all papers in each track spread over 2 or 3 days, not 4
- daily registration, with discounts for 3- and 4-day registrations



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Next steps

- endorsement of concept at business meeting and by SODA PC
- need committee to draft bylaws
- implement at least by SODA 2013

One more thing: membership requirements

- Theme SC, PC chair: have attended 4 of last 5 SODAs
- SODA SC, bylaw committee: have attended 9 of last 10 SODAs