Combinatorics: Challenges and Applications

A conference in honor of Noga Alon's 60th Birthday

January 17-21, 2016, Tel Aviv University, Israel

$$\mathrm{sep}(G) \leq \sqrt{nh^3}$$
$$F(n,\sigma) \leq c^{n\gamma^*(n)}$$
$$APSP(n) \leq n^{\frac{3+\omega}{2}}$$
$$la(G) \leq d/2 + o(d)$$
$$P(n) \leq Cn^{3/2}n!/2^n$$
$$C(G + \overline{G}) \geq k^{\frac{\log k}{8 \log \log k}}$$
$$ex(n, K_{s,s!}) \geq Cn^{1-1/s}$$
$$f(e) \geq e/2 + \sqrt{e/8} + C\sqrt[4]{e}$$
$$|A\dot{+}B| \geq \min\{p, |A| + |B| - 2\}$$
$$\mathbb{P}[|X - Y| \leq 2] \leq 3\mathbb{P}[|X - Y| \leq 1]$$
$$N(\ell, H) = \left(1 + O\left(\frac{1}{\sqrt{\ell}}\right)\right) \cdot \frac{1}{|Aut(H)|} \cdot (2\ell)^{|V(H)|/2}$$
$$L^+(CLIQUE(m,s)) \geq \frac{1}{8}\left(\frac{m}{4s^{3/2}\log m}\right)^{\frac{\sqrt{s}+1}{2}}$$
$$(1 - \lambda_2(G))/2 \leq h(G) \leq \sqrt{2(1 - \lambda_2(G))}$$
$$R(C_4, C_4, K_m) = \Theta(m^2/\log^2 m)$$
$$\lambda_2(G) \geq 2\sqrt{d-1} - o(1)$$

list of speakers

Béla Bollobás, University of Cambridge
Jennifer Chayes, Microsoft Research
Uri Feige, Weizmann Institute
Jacob Fox, Stanford University
Péter Frankl, Alfréd Rényi Institute of Mathematics
Zoltán Füredi, Alfréd Rényi Institute of Mathematics
Shafi Goldwasser, MIT and Weizmann Institute
Gil Kalai, Hebrew University
Nati Linial, Hebrew University
László Lovász, Eötvös Loránd University
Vitali Milman, Tel Aviv University
Assaf Naor, Princeton University
Jaroslav Nešetřil, Charles University
János Pach, EPFL
Yuval Peres, Microsoft Research
Vojtěch Rödl, Emory University
Peter Sarnak, Princeton University and IAS
Alexander Schrijver, CWI Amsterdam
Micha Sharir, Tel Aviv University
Saharon Shelah, Hebrew University and Rutgers University
Joel Spencer, NYU
Endre Szemerédi, Alfréd Rényi Institute of Mathematics
Terence Tao, UCLA
Moshe Tennenholtz, The Technion
Avi Wigderson, IAS
Tamar Ziegler, Hebrew University

Organizing Committee

- **Yossi Azar**, Tel Aviv University
- **Michael Krivelevich**, Tel Aviv University
- **Asaf Shapira**, Tel Aviv University
- **Benny Sudakov**, ETH Zurich
- **Uri Zwick**, Tel Aviv University

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