

# ADFOCS 2020 Pubquiz

Test your knowledge on random (Econ)CS/math facts!

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# Rules

- One team per break-out room.
- One team member fills in Google Form.
- Submit when time is up. No late hand-ins!
- **Winners announced on Thursday at end of MPI-session.**
- ***NO WEB SEARCHES!*** *We are testing your knowledge, not your Googling skills*

Have fun!

# Round 1: Know your community

Guessing record achievements at EC (extracted from DBLP)

EC = ACM Conference on Economics and Computation (held annually since 1999)

# Answers Round 1

- Q1/2: Tuomas Sandholm, with 35 papers.
- Q3: Michal Feldman, with 50 co-authors.
- Q4: Auction(s), with 167 mentions in titles.
- Q5: All streak of 10, except Nicole (broke her streak by being PC co-chair).
- Q6: Complete Characterization of Infinitely Repeated Two-Player Games having Computable Strategies with no Computable Best Response under Limit-of-Means Payoff
- Q7: 11 (School Choice in Chile, by Correa et al.)

Round 2: Test your algorithmic skills  
How well can you match, sort and cluster?

# Answers Round 2

- Q1: Simplex method (1947), Kurt's birth (1949), Nash's Theorem (1951), Nash's letter to the NSA (1955), P vs. NP (1971).
- Q2: Clusters are
  - NP-hard, Goemans-Williamson, 0.87856 → Max-Cut problem
  - PPAD, Columbia University, Greek → Christos H. Papadimitriou
  - Shafi, Johan, Daniel → All won the Gödel Prize **TWICE!**
- Q3: Matches are
  - Ruta → Nash equilibrium Computation in Various Games
  - Jugal → Complementary Pivot Algorithms for Market Equilibria
  - Kurt → Polynomial and Abstract Subrecursive Classes
  - Nicole → Computing with Strategic Agents
- Q4: Clusters are
  - Nash, Ramanujan, Turing → Mathematicians that had a movie made about their life
  - 21,  $\pi$ , 1984 → Movies whose title is a number
  - Matt Damon, Robin Williams, Boston → Good Will Hunting

# Round 3: TCS/Math Musical Parody Trivia

Some researchers have multiple talents.

# Answers Round 3

- Q1: WIT-women: Shuchi Chawla, Nicole Immorlica, Michal Feldman
- Q2: .... ,consulted every **oracle**
- Q3: “I Will Derive” (> 2 million views on Youtube)
- Q4: “Song of the Complexity Classes”
- Q5: .... to the NP, that’s the **polynomial hierarchy**
- Q6: “Hit me Baby, One More Time – Britney Spears”
- Q7: “Bad Guy – Billie Eilish”

# Round 4: Visualization

What are we looking for?

# Answers Round 4

- Q1/2: Single source shortest path algorithm by Bellman-Ford
- Q3/4: Edmond's blossom shrinking algorithm for matching
- Q5: Weighted Max-3-Cut problem
- Q6/7: Topological sorting algorithm by Kahn

Source GIFs for questions 1,2,3,4,6,7: <https://visualgo.net/en>

# Round 5: Get to know MPI

Fun facts about the institute and surrounding area

Join the MPI-session on Thursday (17:45 CEST) with short 5-min. talks by our colleagues!

# Answers Round 5

- Q1: We do not have a pool table...
- Q2: Kurt has roughly 90 graduated PhD students
- Q3: Fox
- Q4: Schloss Dagstuhl
- Q5: 8
- Q6: →

