STOC '97

The 29$^{\text{th}}$ Annual
ACM Symposium on
Theory of Computing

El Paso, Texas
May 4 – May 6, 1997

Sponsored by ACM SIGACT

Registration for STOC '97

To qualify for the early registration fee, your registration application must be postmarked by **Thursday, April 3, 1997**. The registration fee includes the Saturday night reception, the Sunday night business meeting, the Monday night banquet, coffee breaks, lunches, and a copy of the proceedings. Mail or FAX the form below, along with payment (checks payable to UTEP) to:

Conference Services
Division of Professional & Continuing Education
The University of Texas at El Paso
500 W. University
El Paso, Texas 79968
fax (915) 747-5538

Name _____

Address _____

_____

_____

_____

Email _____

Phone _____ FAX _____

Special Needs (Please specify) _____

Affiliation (as you wish it to appear on your name tag):

_____

Please circle one amount below and fill in your membership number if appropriate: #_____.

Registrants in the "Other" category will automatically become SIGACT members for a period of one year.

	Fee (US$)	after April 3
ACM or SIGACT Member	275	345
Student	120	190
Other	345	415

Check your dietary preference:
Kosher ☐   Vegetarian ☐   No Restriction ☐
Number of additional proceedings $40 each:
Number of additional Banquet tickets $45 each:
Total included: $
Credit Card Information (if applicable):
VISA / MasterCard / Discover ($^{\text{circle}}_{\text{one}}$)
Card # _____
Exp. Date: _____

Hotel Reservations
Deadline: April 3, 1997

The conference will be held at the Camino Real Paso Hotel, El Paso, Texas. The rates for STOC '97 are posted below and apply from May 2 to May 9.

Reservation requests **received** by the hotel after the April 3 deadline are at your own risk: availability and rates are then no longer guaranteed. Refer to STOC '97 when making your reservations to obtain the rates listed. To make reservations by *phone*, call (800) 769-4300 or (915) 534-3099.

To make reservations by *fax* or by *mail*, fill out the form below and fax it to fax (915) 534-3024, or mail it to the following address.

Camino Real Hotel, El Paso
ATTN: STOC '97 registration
101 S. El Paso St.
El Paso, TX 79901, USA

You can also make a reservation by using the hotel's website http://www.caminoreal.com/elpaso/home.html. Credit card information or a deposit (in the form of a check or money order for one night's stay made payable to the Camino Real Hotel) must be included. Deposits will be refunded if the hotel is notified prior to 48 hours before arrival.

Rate: $60 plus tax for a single room, $70 plus tax for a double room. A rollaway bed is available for an extra charge of $15 per night.

Check room type: Single □   Double □
Smoking □   Non-smoking □

Arrival date _____ Departure date _____
check-in time: 3:00 pm   check-out time: 12:00 noon

Name _____

Address _____

_____

_____ Phone _____

Sharing with _____

If paying by credit card please complete:
American Express □   Master Card □   Visa □
Carte Blanche □   Diner's Club □

Credit Card # _____

Expiration date _____I authorize the Camino Real Hotel, El Paso, TX, to charge the above account for the amount equal to one night's stay in case of a no-show.

Signature _____

Reception: 7 pm − 10 pm

SUNDAY, MAY 4, 1997

Session 1A: 8:25 am − 9:35 am
Chair: Richard Anderson

8:25 Some Optimal Inapproximability Results: Johan Håstad, *Royal Inst. of Technology, Sweden*.

8:50 A Complete Classification of the Approximability of Maximization Problems Derived from Boolean Constraint Satisfaction: Sanjeev Khanna, *Stanford*; Madhu Sudan, David P. Williamson, *IBM*.

9:15 When Hamming Meets Euclid: The Approximability of Geometric TSP and MST: Luca Trevisan, *Univ. of Geneva*.

Session 1B: 8:25 am − 9:35 am
Chair: Peter Shor

8:25 Approximate Complex Polynomial Evaluation in Near Constant Work per Point: John H. Reif, *Duke*.

8:50 Fast and Precise Computations of Discrete Fourier Transforms using Cyclotomic Integers: Joe Buhler, *Reed College*; Amin Shokrollahi, *ICSI and Universität Bonn*; Volker Stemann, *ICSI*.

9:15 Quantum Computation of Fourier Transforms over Symmetric Groups: Robert Beals, *Univ. of Arizona*.

Break: 9:35 am − 10:10 am

Session 2A: 10:10 am − 10:55 am
Chair: Martin Farach

10:10 Efficient Algorithms for Comparing Unrooted Evolutionary Trees: Ming-Yang Kao, *Duke*; Tak Wah Lam, *Univ. of Hong Kong*; Teresa Przytycka, *Univ. of Maryland*; Wing Kin Sung, Hing Fung Ting, *Univ. of Hong Kong*.

10:35 Tree Pattern Matching and Subset Matching in Randomized $O(n \log^3 m)$ Time: Richard Cole, *NYU*; Ramesh Hariharan, *Indian Inst. of Science, Bangalore*.

Session 2B: 10:10 am − 10:55 am
Chair: Paul Beame

10:10 Randomized $\Omega(n^2)$ Lower Bound for Knapsack: Dima Grigoriev, *Penn. State*; Marek Karpinski, *Universität Bonn and ICSI*.

10:35 Exponential Lower Bounds for Depth 3 Boolean Circuits: Ramamohan Paturi, *UC San Diego*; Michael E. Saks, *Rutgers*; Francis Zane, *UC San Diego*.

Invited talk: 11:00 am − 12:00 noon
Chair: Peter Shor

11:00 Algorithmic Complexity in Coding Theory: Alexander Vardy, *Univ. of Illinois*.

Lunch break: 12:00 noon − 1:40 pm

Session 3A: 1:40 pm − 3:15 pm
Chair: Valerie King

1:40 Approximating Total Flow Time on Parallel Machines: Stefano Leonardi, *Università di Roma La Sapienza*; Danny Raz, *ICSI*.

2:05 Non-Clairvoyant Multiprocessor Scheduling of Jobs with Changing Execution Characteristics: Jeff Edmonds, Donald D. Chinn, Tim Brecht, Xiaotie Deng, *York Univ*.

2:30 Better Bounds for Online Scheduling: Susanne Albers, *Max-Planck-Institut, Saarbrücken*.

2:55 Optimal Time-Critical Scheduling via Resource Augmentation: Cynthia Phillips, *Sandia*; Cliff Stein, *Dartmouth*; Eric Torng, *Michigan State*; Joel Wein, *Polytechnic Univ., Brooklyn*.

Session 3B: 1:40 pm − 3:15 pm
Chair: Mihir Bellare

1:40 Practical Erasure-Resilient Codes: Michael Luby, *DEC and UC Berkeley*; Michael Mitzenmacher, *DEC*; Amin Shokrollahi, *ICSI and Universität Bonn*; Daniel Spielman, *MIT*; Volker Stemann, *ICSI*.

2:05 Spectral Techniques for Expander Codes: John Lafferty, *CMU*; Daniel Rockmore, *Dartmouth*.

2:30 Improved Padé Approximation Approach to Decoding Error-Correcting Codes: Victor Y. Pan, *CUNY*.

2:55 Fault Tolerant Quantum Computation with Constant Error: Dorit Aharonov, Michael Ben-Or, *Hebrew Univ*.

Break: 3:15 pm − 3:50 pm

Session 4A: 3:50 pm – 5:50 pm
Chair: David Zuckerman

3:50 On the Construction of Pseudo-Random Permutations: Luby-Rackoff Revisited: Moni Naor, Omer Reingold, *Weizmann Inst.*

4:15 Reducing Randomness via Irrational Numbers: Zhi-Zhong Chen, *UC Berkeley and Tokyo Denki Univ.*; Ming-Yang Kao, *Duke.*

4:40 Is There an Algebraic Proof for P $\neq$ NC?: Ketan Mulmuley, *Univ. of Chicago and Indian Inst. of Technology, Bombay.*

5:05 P = BPP unless E has Sub-Exponential Circuits: Derandomizing the XOR Lemma: Russell Impagliazzo, *UC San Diego*; Avi Wigderson, *Hebrew Univ.*

5:30 SL $\subseteq$ L$^{\frac{4}{3}}$: Roy Armoni, *Hebrew Univ.*; Amnon Ta-Shma, *Weizmann Inst.*; Avi Wigderson, Shiyu Zhou, *Hebrew Univ.*

Session 4B: 3:50 pm – 5:50 pm
Chair: Michel Goemans

3:50 Using Random Sampling to Find Maximum Flows in Uncapacitated Undirected Graphs: David Karger, *MIT.*

4:15 Combinatorial Complexity of the Central Curve: Peter A. Beling, *Univ. of Virginia*; Sushil Verma, *Univ. of Southern California.*

4:40 Approximation of k-Set Cover by Semi-Local Optimization: Rong-chii Duh, Martin Fürer, *Penn. State.*

5:05 Approximation Algorithms for Facility Location Problems: David B. Shmoys, Éva Tardos, *Cornell*; Karen Aardal, *Utrecht Univ.*

5:30 Covering Points in the Plane by k-Tours: Towards a Polynomial Time Approximation Scheme for General k: Tetsuo Asano, *Osaka E. C. Univ.*; Naoki Katoh, *Kobe Univ. of Commerce*; Hisao Tamaki, Takeshi Tokuyama, *IBM.*

Business Meeting: 9 pm – 11 pm

MONDAY, MAY 5, 1997

8:10 Welcome by UTEP president: Diana Natalicio.

Session 5A: 8:25 am – 9:35 am
Chair: Mihir Bellare

8:25 A Public-Key Cryptosystem with Worst-Case/Average-Case Equivalence: Miklos Ajtai, Cynthia Dwork, *IBM.*

8:50 Private Information Storage: Rafail Ostrovsky, Victor Shoup, *Bellcore.*

9:15 Computationally Private Information Retrieval: Benny Chor, Niv Gilboa, *Technion.*

Session 5B: 8:25 am – 9:35 am
Chair: Lisa Hellerstein

8:25 Approximating Hyper-Rectangles: Learning and Pseudo-Random Sets: Peter Auer, *Technische Universität Graz*; Philip M. Long, Aravind Srinivasan, *National Univ. of Singapore.*

8:50 A Composition Theorem for Learning Algorithms with Applications to Geometric Concept Classes: Shai Ben-David, *Technion*; Nader H. Bshouty, *Univ. of Calgary and Technion*; Eyal Kushilevitz, *Technion.*

9:15 Theory and Applications of Predictors that Specialize: Yoav Freund, Robert E. Schapire, Yoram Singer, *AT&T Labs*; Manfred K. Warmuth, *UC Santa Cruz.*

Break: 9:35 am – 10:10 am

Session 6A: 10:10 am – 10:55 am
Chair: Shimon Even

10:10 On-Line Algorithms for Steiner Tree Problems: Piotr Berman, Chris Coulston, *Penn. State.*

10:35 Online Algorithms for Selective Multicast and Maximal Dense Trees: Baruch Awerbuch, Tripurari Singh, *Johns Hopkins.*

Session 6B: 10:10 am – 10:55 am
Chair: David Zuckerman

10:10 Direct Product Results and the GCD Problem, in Old and New Communication Models: Itzhak Parnafes, Ran Raz, *Weizmann Inst.*; Avi Wigderson, *Hebrew Univ.*

10:35 The Linear-Array Problem in Communication Complexity Resolved: Martin Dietzfelbinger, *Universität Dortmund.*

Invited talk: 11:00 am – 12:00 pm
Chair: Moti Yung

11:00 Paul Erdős (1913–1996): His Influence on the Theory of Computing: László Babai, *Univ. of Chicago.*

Lunch break: 12:00 noon – 1:40 pm

Session 7A: 1:40 pm – 3:15 pm
Chair: Richard Anderson

1:40 Permanents, Pfaffian Orientations, and Even Directed Circuits: William McCuaig, *Univ. of Toronto*; Neil Robertson, *Ohio State*; Paul Seymour, *Bellcore*; Robin Thomas, *Georgia Inst. of Technology*.

2:05 Property Testing in Bounded Degree Graphs: Oded Goldreich, *Weizmann Inst.*; Dana Ron, *MIT*.

2:30 Exploring Unknown Environments: Susanne Albers, *Max-Planck-Institut, Saarbrücken*; Monika Henzinger, *DEC*.

2:55 On Floorplans of Planar Graphs: Xin He, *SUNY Buffalo*.

Session 7B: 1:40 pm – 3:15 pm
Chair: Moti Yung

1:40 Linear Zero-Knowledge — A Note on Efficient Zero-Knowledge Proofs and Arguments: Ronald Cramer, *ETH Zurich*; Ivan Damgård, *Univ. of Aarhus and BRICS*.

2:05 Commodity-Based Cryptography: Donald Beaver, *Transarc Corp.*

2:30 Oblivious Data Structures: Applications to Cryptography: Daniele Micciancio, *MIT*.

2:55 Is Linear Hashing Good?: Noga Alon, *Tel Aviv Univ. and Inst. for Advanced Study, Princeton*; Martin Dietzfelbinger, *Universität Dortmund*; Peter Bro Miltersen, *Univ. of Aarhus*; Erez Petrank, *DIMACS*; Gábor Tardos, *Mathematical Inst., Budapest, and Inst. for Advanced Study, Princeton*.

Break: 3:15 pm – 3:50 pm

Session 8A: 3:50 pm – 5:25 pm
Chair: Mihir Bellare

3:50 A Sub-Constant Error-Probability Low-Degree Test and a Sub-Constant Error-Probability PCP Characterization of NP: Ran Raz, *Weizmann Inst.*; Shmuel Safra, *Tel-Aviv Univ.*

4:15 Improved Low Degree Testing and its Applications: Sanjeev Arora, *Princeton*; Madhu Sudan, *IBM*.

4:40 Probabilistically Checkable Proofs with Zero Knowledge: Joe Kilian, *NECI*; Erez Petrank, *DIMACS*; Gábor Tardos, *Mathematical Inst., Budapest, and Inst. for Advanced Study, Princeton*.

5:05 Making Games Short: Uri Feige, *Weizmann Inst.*; Joe Kilian, *NECI*.

Session 8B: 3:50 pm – 5:25 pm
Chair: Valerie King

3:50 Improved Routing and Sorting on Multibutterflies: Bruce M. Maggs, *CMU*; Berthold Vöcking, *Univ. of Paderborn*.

4:15 Static and Dynamic Path Selection on Expander Graphs: A Random Walk Approach: Andrei Z. Broder, *DEC*; Alan M. Frieze, *CMU*; Eli Upfal, *IBM and Weizmann Inst.*

4:40 On Sorting Strings in External Memory: Lars Arge, *Duke*; Paolo Ferragina, *Università di Pisa*; Roberto Grossi, *Università di Firenze*; Jeffrey S. Vitter, *Duke*.

5:05 Pointer Jumping Requires Concurrent Read: Noam Nisan, Ziv Bar-Yossef, *Hebrew Univ.*

BANQUET: Buses leave at 6 pm
for Cattleman's Steak House

TUESDAY, MAY 6, 1997

Session 9A: 8:15 am – 9:50 am
Chair: Moti Yung

8:15 Lower Bounds for Distributed Coin Flipping and Randomized Consensus: James Aspnes, *Yale*.

8:40 Byzantine Quorum Systems: Dahlia Malkhi, Michael Reiter, *AT&T Labs*.

9:05 All of Us Are Smarter Than Any of Us: More on the Robustness of the Consensus Hierarchy: Wai-Kau Lo, Vassos Hadzilacos, *Univ. of Toronto*.

9:30 The Decidability of Distributed Decision Tasks: Maurice Herlihy, *Brown*; Sergio Rajsbaum, *UNAM, México*.

Session 9B: 8:15 am – 9:50 am
Chair: Lisa Hellerstein

8:15 Two Algorithms for Nearest-Neighbor Search in High Dimensions: Jon M. Kleinberg, *Cornell and IBM*.

8:40 Nearest Neighbor Queries in Metric Spaces: Kenneth L. Clarkson, *Bell Labs, Lucent*.

9:05 Locality-Preserving Hashing in Multidimensional Spaces: Piotr Indyk, Rajeev Motwani, *Stanford*; Prabhakar Raghavan, *IBM*; Santosh Vempala, *CMU*.

9:30 Incremental Clustering and Dynamic Information Retrieval: Moses Charikar, Chandra Chekuri, Tomas Feder, Rajeev Motwani, *Stanford*.

Break: 9:50 am − 10:25 am

Session 10A: 10:25 am − 12:00 noon
Chair: Martin Farach

10:25 A Constant-Factor Approximation Algorithm for Packet Routing, and Balancing Local vs. Global Criteria: Aravind Srinivasan, Chung-Piaw Teo, *National Univ. of Singapore*.

10:50 Universal O(congestion+dilation+$\log^{1+\epsilon} N$) Local Control Packet Switching Algorithms: Rafail Ostrovsky, *Bellcore*; Yuval Rabani, *Technion*.

11:15 Relieving Hot Spots on the World Wide Web: David Karger, Eric Lehman, Daniel Lewin, Matt Levine, Tom Leighton, Rina Panigrahy, *MIT*.

11:40 Allocating Bandwidth for Bursty Connections: Jon Kleinberg, *IBM and Cornell*; Yuval Rabani, *Technion*; Éva Tardos, *Cornell*.

Session 10B: 10:25 am − 12:00 noon
Chair: David Zuckerman

10:25 The Swendsen-Wang Process Does Not Always Mix Rapidly: Vivek K. Gore, Mark R. Jerrum, *Univ. of Edinburgh*.

10:50 Approximately Counting up to Four: Michael Luby, *DEC and UC Berkeley*; Eric Vigoda, *UC Berkeley and ICSI*.

11:15 An Algorithm, Unbiased for User Impatience, for Exact Sampling via Markov Chains: James Fill, *Johns Hopkins*.

11:40 Sampling Lattice Points: Ravi Kannan and Santosh Vempala, *CMU*.

Lunch break: 12:00 noon − 1:30 pm

Session 11A: 1:30 pm − 2:15 pm
Chair: Peter Shor

1:30 Page Replacement with Multi-Size Pages and Applications to Web Caching: Sandy Irani, *UC Irvine*.

1:55 A polylog(n)-Competitive Algorithm for Metrical Task Systems: Yair Bartal, *UC Berkeley and ICSI*; Avrim Blum, Carl Burch, Andrew Tomkins, *CMU*.

Session 11B: 1:30 pm − 2:40 pm
Chair: Paul Beame

1:30 On ACC^0[p^k] Frege Proofs: Alexis Maciel, *Univ. of Maryland*; Toniann Pitassi, *Univ. of Arizona*.

1:55 Reductions in Complexity Theory: An Isomorphism Theorem and a Gap Theorem: Manindra Agrawal, *Indian Inst. of Technology, Kanpur*; Eric Allender, *Rutgers*; Russell Impagliazzo, *UC San Diego*; Toniann Pitassi, *Univ. of Arizona*; Steven Rudich, *CMU*.

2:20 Read-Once Branching Programs, Rectangular Proofs of the Pigeonhole Principle, and the Transversal Calculus: Alexander Razborov, *Steklov Inst.*; Avi Wigderson, *Hebrew Univ.*; Andrew Yao, *Princeton*.

End of Symposium: 2:40 pm

General Information

Location:
All conference events will take place at the Camino Real Hotel, El Paso, Texas, a national historic landmark hotel. It is located in downtown El Paso, at 101 S. El Paso St.

Registration:
The registration desk will be open from 7 − 9 pm on Saturday, from 8 am − 5 pm Sunday and Monday, and from 8 am − 2:30 pm Tuesday.

Registration Fee:
The registration fee includes the Saturday night reception, the Sunday night business meeting, the Monday night banquet, coffee breaks, lunches, and a copy of the proceedings.

Refund requests will be honored until April 15, with a $25 penalty. No refunds after April 15. US participants need to supply their SSN with a refund request (this is the official University policy). Please contact Lisa Zabel (Conference Services, University of Texas at El Paso), by email at lzabel@utep.edu or by phone at (915) 747-5099 if you have any questions about the refunds.

Proceedings:
Prepaid additional copies of the STOC '97 proceedings can be ordered with the registration form and will be available for pick-up at registration. There will also be copies available at the registration desk on a first come, first served basis, while supplies last, for a special discount price of $40 per copy.

Hotel Information:
Our block of rooms at the Camino Real Hotel is being held from May 2 until May 9. We encourage you to make your reservations by telephone.

The Camino Real Hotel, El Paso is a registered historical landmark in a 400 year old city. The 17-story, 360-room hotel overlooks two nations and three states. Located downtown in the center of the business district, the Camino Real Hotel, El Paso, is also adjacent to the El Paso Convention and Performing Arts Center. The hotel is only a few blocks from the bridge into Juarez, Mexico. The hotel has an outdoor swimming pool, a workout room with sauna, and several restaurants.

Banquet:

The banquet will be held on May 5 at *Cattleman's Steak House*, located on a ranch in the middle of the desert about 35 miles east of El Paso. The setting, service and food here are renowned in the Southwest. A true western atmosphere will let you relax and enjoy the desert area at its best.

Buses will be provided to and from the restaurant. Buses leave the hotel at 6 P.M.

The restaurant's phone number is (915) 544-3200.

Special Dietary Needs:

Vegetarian and Kosher meals are available with advance notice (check box). If you have any questions related to dietary preferences please contact Lisa Zabel (Conference Services, Universitity of Texas at El Paso) by email at lzabel@utep.edu or by phone at (915) 747-5099.

Official Airlines:

American Airlines has been appointed the official air carrier for STOC '97. It is offering special discounts for STOC'97 participants. To get a discount, when you call for a reservation (telephone 800-433-1790), be sure to mention the Star File number NBR – S 0157AE, and refer to our event as "STOC'97". You get a 5% discount on any published fare and a 10% discount on any full coach fare (restrictions may apply).

Getting to the Hotel:

Complimentary airport shuttle service is available between the hotel and the El Paso International Airport (which is approximately 15 minutes away). The shuttle comes to the airport every half hour. You can use the complimentary phone located at the airport near the luggage claim area to inquire about the next shuttle. (If you prefer to take a taxi, it would cost about $15.)

To get back to the airport, please contact the front desk to make a reservation.

¿From the hotel, you can walk to restaurants, shops and museums. There are many exciting things to see around El Paso. If you plan to travel beyond the downtown area, Car rental is advisable.

If you are driving your own car: the hotel is located near the Downtown El Paso Exit on Interstate 10.

If you are *driving West* on I-10, the Downtown Exit (19B) will lead you to Missouri Ave. Follow Missouri for four blocks, and turn left on Oregon. After the big plaza, Oregon will end; follow the street that keeps right. You will see the Camino Real Hotel straight ahead.

From the airport: as you exit the El Paso International Airport, you will be on Airway Dr. Take Airway Dr. to I-10 West. You will be traveling on I-10 West for approximately 15–20 minutes. Exit at the Downtown Exit (19B) and follow instructions above.

If you are *driving East* on I-10, the Downtown Exit (19) will lead you to Wyoming Ave. Follow Wyoming for two block, and turn right on Oregon. Then, follow instructions as above.

At the hotel, underground parking is available for a flat rate of $3 per day. The garage is monitored by security cameras on a 24-hours basis.

Child Care:

Child care is available; if you need babysitting please contact the hotel's front desk.

Climate:

The day-time temperature in El Paso in the beginning of May varies between 75 and 95 degrees Fahrenheit ($25°C$ to $35°C$), the average day-time temperature is 83 Fahrenheit ($29°C$). Night-time temperatures can be 30 degrees lower ($13°C$ to $18°C$). The humidity is very low, and rain is unlikely.

Things to Do:

Discover a city that stretches the imagination — El Paso, Texas' westernmost city. A city of nearly three-quarters of a million people, which sprawls across hundreds of square miles of desert and rambling foothills. The Franklin Mountains, southern tip of the Rockies, slice El Paso nearly in two. With its classic Western geography and tri-cultural history, El Paso makes an intriguing place to visit.

El Paso is the gateway to Juarez, Mexico (US citizens do not need a visa for a short visit across the border), and to southern New Mexico with such recognized attractions as Fort Bliss, Carlsbad Caverns and White Sands National Memorial. El Paso's dry, sunny, warm desert climate earned the city the nickname *Sun City*.

El Paso Saddleblanket, located at 601 N. Oregon, a walking distance from the hotel, a trading post with a 36,000 sq.ft. that provides a huge selection of Indian rugs, pottery, baskets, onyx, leather goods, horns, hides, antiques, skulls, dolls, saddles, purses, serapes.

Missions of Ysleta, Socorro and San Elizario Presidio. Visit Texas' oldest missions, nestled along the once famous Camino Real, the King's Highway. Take I-10 East/West and take the Zaragosa exit, turn south to

Alameda Street, turn left and make an immediate right on Old South Pueblo Road. The missions can be visited daily from 9:00 A.M. – 5:00 P.M. unless there are special services scheduled, as they are practicing churches.

Hart's Mill Site. Located at 1720 West Paisano Drive. A water-powered grist mill on the banks of the Rio Grand was built by Simeon Hart in 1849. The adjacent Hart's residence was built in early 1854. Flour and cornmeal from the mill, or EL Molino as it was called, were sold throughout the area to the military, settler and wagon trains passing through. The community which sprang up around the mill was one of five which later expanded to form the city of El Paso. Only the Hart's adobe residence survives, known now as the *La Hacienda Cafe.*

Magoffin Homestead Historic Site, Located at 1120 Magoffin Street. A territorial style adobe home built in 1875 by pioneer Joseph Magoffin. Open Wed-Sun 9:00 A.M. – 4:00 P.M.

El Paso Museum of Art, located at 1211 Montana, offers a regular schedule of temporary fine art exhibitions, as well as works of European masters from the Samuel H. Kress collection. It also has significant holdings in American, Mexican, Colonial and Southwestern art. Open Tue-Sat 10:00 A.M. – 5:00 P.M. Sun. 1:00 – 5:00 P.M.

Wilderness Park Museum. Located on Transmountain Road just west of Highway 54. The museum shows exhibits and dioramas about mankind's adaptation to the southwestern environment from prehistoric times to present. Open Tue-Sun, 9:00 A.M. – 5:00 P.M.

El Paso Holocaust Museum and Study Center. Located at 401 Wallenberg Drive, The El paso Holocaust Museum and Study Center chronicles the events that occurred during a dark period in Europe.

For Kids:

El Paso Zoo, located at 4001 E. Paisano. The 18 acre zoo displays > 430 animals, including endangered thick-billed parrots, jaguars, and golden lion tamarins.

Insights Science Museum, located in the heart of downtown, 505 N. Santa Fe, a walking distance from our hotel. Insights is a specially designed hands-on museum geared to young people. Open 9 A.M. – 5 P.M. Tue-Sat, noon to 5 P.M. on Sundays. Information: 534-0000.

Surrounding Sites of Interest:

Franklin Mountain State Park is located in the Franklin Mountains which separate El Paso's east and west sides. This park offers several hiking trails and picnic areas.

Old Mesilla (New Mexico), a quiet village of great charm and historic color on the southwestern edge of Las Cruces. Thick-walled adobe buildings which survived the decades are clustered around the old church and Spanish plaza as they were 100 years ago. Many fine shops and restaurants can offer hours of pleasure.

Hueco Tanks State Historic Park, located east of El Paso, is a unique rock formation with caves and cliffs covering 860 acres. Used by Indians through the centuries, the park contains over 2000 pictographs. Open for picnicking, exploring and camping.

Carlsbad Caverns National Park (New Mexico) is located 145 miles east-northeast of El Paso. It is one of the world's largest caves with 20 miles of underground corridors and huge chambers. Each evening about sunset between May and October, tens of thousands of bats exit the cave's entrance in a spectacular swarm to feed on insects through the night.

Guadalupe Mountains National Park, Located 110 miles east of El Paso, contains over 46,000 acres of undeveloped parkland. Excellent for hiking and enjoying the unspoiled outdoors. McKittrick Canyon offers the most colorful autumn leaf show in the state. Guadalupe Peak is the highest point in Texas, 8,749 feet.

Elephant Butte Lake State Park (New Mexico), located about 120 miles northwest of El Paso, is the largest and most popular lake in New Mexico. It is 43 miles long and has a full array of water-based sports and land activities.

White Sands National Monument (New Mexico), located 98 miles north of El Paso on highway 70, consists of nearly 300 square miles of pure white sand that make up the world's largest gypsum dune field. A museum, scenic drive, and picnic areas are available.

More information can be obtained from the STOC'97 World Wide Web page, whose URL is http://sigact.acm.org/stoc97 (click on El Paso for more information about these and other sites).

Program Committee:
Richard Anderson, Paul Beame, Mihir Bellare, Bob Cypher, Shimon Even, Martin Farach, Lance Fortnow, Michel Goemans, Lisa Hellerstein, Valerie King, Peter Shor (Chair), Jack Snoeyink, Mikkel Thorup, Moti Yung, David Zuckerman.

Local Committee:
Luc Longpré (Chair), longpre@cs.utep.edu
Vladik Kreinovich, vladik@cs.utep.edu

Conference Organization:
by Conference Services,
the University of Texas at El Paso.

Publicity:
Ian Parberry.

Site Coordinator:
Alok Aggarwal.