

# CURRICULUM VITAE

## Rafail Ostrovsky

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**Personal  
Data**

- Born in St. Petersburg, Russia, 1963.
- U.S. citizen, naturalized in Boston, MA, 1986.

**Research  
Interests**

- Cryptography;
- Streaming Algorithms;
- Routing and Network Algorithms;
- Metric Embeddings;
- Search and Classification Problems on High-Dimensional Data.

**Education**

Ph.D. in Computer Science, Massachusetts Institute of Technology, 1989-92.

- Thesis titled: “Software Protection and Simulation on Oblivious RAMs”, Ph.D. advisor: Prof. Silvio Micali. Final version appeared in Journal of ACM, 1996. Practical applications of thesis work appeared in U.S. Patent No.5,123,045.
- Minor: “Management and Technology”, M.I.T. Sloan School of Management.

M.S. in Computer Science, Boston University, 1985-87.

B.A. *Magna Cum Laude* in Mathematics, State University of New York at Buffalo, 1980-84. Department of Mathematics Graduation Honors: *With highest distinction*.

**Appointments** UCLA Computer Science Department

(2003 – present): Professor of Computer Science.

UCLA Department of Mathematics

(2006 – present): Professor of Mathematics (by courtesy).

UCLA School of Engineering

(2003 – present): Director, Center for Information and Computation Security. (See <http://www.cs.ucla.edu/security/>.)

## **Appointments** Bell Communications Research

(cont.)

(1999 – 2003): Senior Research Scientist;

(1995 – 1999): Research Scientist,

Mathematics and Cryptography Research Group, Applied Research.

### **Berkeley**

(Fall 1992 – August 1995): NSF Mathematical Sciences Postdoctoral Research Fellow. Host: Prof. Manuel Blum.

### **IBM T.J. Watson Research Center, Hawthorne, New York.**

(July – August 1992); (June – September 1991); (July – September 1990): Summer Internship research positions: distributed algorithms, cryptography.

### **AT&T Bell Laboratories, Murray Hill, New Jersey.**

(May – July 1990). Math Research Center. Summer Internship research position: cryptography, distributed and parallel algorithms.

### **Index Technology Corporation, Cambridge, Massachusetts.**

(1987 – 1989). Research Engineer, Product Planning, Architecture and Research Group: algorithm design.

### **Digital Equipment Corporation, Hudson, Massachusetts.**

(June – August 1985); (June – August 1986). Summer research internship: graph and pattern-matching algorithms.

## **Selected Honors and Awards**

- Quantum Information Processing (QIP) 2011: paper nominated for QIP 2011 plenary talk.
- Plenary Invited Speaker - FBI 2009 conference on cyber security and Law Enforcement.
- Best Paper Award of the 2008 International Conference on Computing and Combinatorics (COCOON-2008);
- Plenary Invited Speaker – Public Key Cryptography international conference, 2007.
- IBM Faculty Award, 2006.
- 2006 and 2005 Xerox Corporate Innovation Faculty Award.
- 2006 Xerox Corporation Distinguished Lecture Series invited speaker.
- 2005 Distinguished Cryptographer of the Year Lecture Series NTT Labs, Kanagawa, Japan.
- OKAWA 2004 Research Award.
- SAIC 2002 Publication Prize for Best SAIC-employee Publication in Mathematics and Computer Science (SAIC bought Bellcore in 1997. SAIC was Bellcore Parent company with over 40,000 engineers and scientists at the time of the award).
- SAIC 2001 Publication Prize for Best SAIC-employee Publication in Mathematics and Computer Science.

**Selected Honors and Awards (cont.)**

- SAIC 1999 Publication Prize for Best SAIC-employee Publication in Information and Communications Technology.
- Bellcore prize for excellence in research, 1996.
- Henry H. Taub Prize for the paper “One-Way Functions are Essential for Non-Trivial Zero-Knowledge” 1993.
- NSF Mathematical Sciences Postdoctoral Research Fellowship, 1992-1995.
- IBM Graduate Fellowship, 1990-92.

**Doctoral Students**

- Professor Vladimir Braverman (CS Ph.D., 2011, will soon be a CS tenure-track faculty at Johns Hopkins University.)
- Dr. Nishanth Chandran (CS Ph.D., 2011, will soon be a postdoctoral researcher at Microsoft, Redmond.)
- Dr. Omkant Pandey (CS Ph.D., 2010, now a researcher at Microsoft, Redmond.)
- Dr. Brett Hemenway (Math Ph.D., 2010, now a postdoctoral researcher at U. Michigan)
- Dr. Paul Bunn (Math Ph.D., 2010, now a researcher at GOOGLE.)
- Dr. Ryan Moriarty (CS Ph.D., 2010, now an entrepreneur in Silicon Valley. Startups: “apprats”, “flotate”.)
- Dr. Vipul Goyal (CS Ph.D., 2009, now a researcher at Microsoft Research, India.)
- Dr. Steve Lu (Math Ph.D., 2009, now a researcher at high-tech startup.)
- Professor William E. Skeith III (Math Ph.D., 2007; now CS tenure-track faculty at City College of NY).
- Professor Jonathan Katz (CS Ph.D. 2002, now tenured CS faculty at U. of Maryland.)

**Post-Doctoral Fellows and Visitors**

- Dr. Jens Groth (postdoc (2005-2007), now professor at UCL, England.)
- Prof. Yuval Ishai (3-year Sabbatical from Technion 2009-2011)
- Claudio Orlandi (6-month visiting Ph.D. student from Aarhus, 2010)
- Prof. Ivan Vinsconti (Sabbaticals from U. Salerno, 2009-10, and 2011-13.)
- Prof. Eyal Kushilevitz (6-month sabbatical from Technion, 2010)

**Professional Activities**

- **UC Privacy and Information Security Steering Committee**, appointed by University of California President, Mark G. Yudof. 2010–present.
- **Advisory Board Member** UCLA Advisory Board On Privacy and Data Protection 2010–present.

**Professional  
Activities  
(cont.)**

- **Editorial Board member**, Journal of Cryptology 2006-present.
- **Editorial Board member**, Algorithmica Journal 2005-present.
- **Editorial Board member**, International Journal of Information and Computer Security. 2004-present.
- **Steering Committee member**, Conference on Security and Cryptography for Networks (SCN) 2005-present.
- **Program Committee Chair**, FOCS-2011. 52nd Annual IEEE Symposium on Foundations of Computer Science, October 22-25, 2011 Palm Springs, California
- **Program Committee Chair**, Sixth Conference on Security and Cryptography for Networks Amalfi, September 10-12, 2008. The proceedings of SCN 2008 appeared in LNCS 5229)
- **Program Chair**, IPAM (International Institute of Pure and Applied Mathematics) three month program on Cybersecurity. September - December, 2006 with over fifty participants invited to spend an entire semester in residence at UCLA, and four workshops attracting over 150 participants. (Funded by NSF.)
- **Co-organizer**, IPAM Workshop Locally decodable codes, PIR, privacy-preserving data-mining, and encryption with special properties. October 25 - 28, 2006, IPAM.
- **Co-organizer**, IPAM Workshop Foundations of secure multi-party computation and zero-knowledge and its applications. November 13 - 17, 2006, IPAM.
- **Program Co-chair**, Dagshtul Workshop Anonymous Communication and its Applications October 9-14, 2005.
- **Program Co-organizer**, IPAM Workshop Multiscale Geometry and Analysis in High Dimensions October 19-23, 2004.
- **Program Co-organizer**, DIMACS Workshop Cryptographic Protocols in Complex Environments May 15-17, 2002.
- Program committee member PODS-2011. ACM SIGMOD/PODS Conference, Athens, Greece
- Program committee member ICALP-2011. The 38th International Colloquium on Automata, Languages and Programming, July 4-8, Zrich, Switzerland.
- Program committee member EUROCRYPT-2011. May 15th-19th, 2011, Tallinn, Estonia
- Program committee member CT-RSA 2011. The Cryptographers' Track (CT-RSA) is a crypto research conference within the RSA 2011 Conference.
- Program committee member TCC-2010: Seventh Theory of Cryptography Conference, 2010.
- Program committee member EUROCRYPT-2009 Cologne, April 26-30, 2009.

**Professional  
Activities  
(cont.)**

- Program committee member Algosensors-2009 5th International Workshop on Algorithmic Aspects of Wireless Sensor Networks 2009.
- Program committee member FOCS-2008 49th Annual IEEE Symposium on Foundations of Computer Science.
- Program committee member PKC-2007: International Workshop on Practice and Theory in Public Key Cryptography, (Apr 17-19 2007, Beijing). China 2007
- Program committee member ACISP-2007: Australian Conference on Information Security and Privacy July 2-6, 2007, Townsville, Queensland, Australia.
- Program committee member ICALP-2006: 33rd International Colloquium on Automata, Languages and Programming, July 9-16, 2006, Venice, Italy.
- Program committee member STOC-2006: Annual ACM Symposium on Theory of Computing, May 2006.
- Program committee member PKC-2006: International Workshop on Practice and Theory in Public Key Cryptography, April 24-26, New York City, USA.
- Program committee member INDOCRYPT-2005 December 10-12, 2005 Indian Institute of Science Bangalore, India, 2005.
- Program committee member Eurocrypt-2005, Aarhus, May 22-26, 2005.
- Program committee member TCC-2005: Second Theory of Cryptography Conference, Feb 2005.
- Program committee member SCN-2004: Security in Communication Networks 2004 (SCN'04) September 8-10, Amalfi, Italy.
- Program committee member PODC-2004: 23rd Annual ACM Symposium on Principles of Distributed Computing, July 2004.
- Program committee member CRYPTO-2004: 24th Annual IACR/IEEE Conference on Cryptologic Research,
- Program committee member CRYPTO-2003: 23rd Annual IACR/IEEE Conference on Cryptologic Research,
- Program committee member STOC-2003: Annual ACM Symposium on Theory of Computing May of 2003.
- Program committee member CRYPTO-2002: 22nd Annual IACR/IEEE Conference on Cryptologic Research.
- Program committee member RANDOM-2002: The 6th International Workshop on Randomization and Approximation Techniques in Computer Science, September 13-15, 2002.
- Program committee member SCN-2002: Third Workshop on Security in Communication Networks, September 2002, Amalfi, Italy
- Program committee member STOC-2000: Annual ACM Symposium on Theory of Computing, 2000.

**Professional  
Activities  
(cont.)**

- Program committee member SODA-2000: Eleventh Annual ACM-SIAM Symposium on Discrete Algorithms, January 1-9, 2000, San Francisco.
- Program committee member SCN-99: Second Workshop on Security in Communication Networks, September 1999, Amalfi, Italy
- Program committee member CRYPTO-98: 18th Annual IACR/IEEE Conference on Cryptologic Research 1998.
- Program committee member ISTCS-97: 5th ISRAEL Symposium on Theory of Computing and Systems, 1997.

**Patents**

1. Oded GOLDREICH and Rafail OSTROVSKY “COMPREHENSIVE SOFTWARE PROTECTION SYSTEM” U.S. Patent No.5,123,045.
2. Rafail OSTROVSKY and Eyal KUSHILEVITZ, “METHOD AND APPARATUS FOR PRIVATE INFORMATION RETRIEVAL FROM A SINGLE ELECTRONIC STORAGE DEVICE” U.S. Patent 6,167,392.
3. Rafail OSTROVSKY, Giovanni DI CRESCENZO, And Yuval ISHAI, “METHOD AND SYSTEM FOR NON-MALLEABLE AND NON-INTERACTIVE CRYPTOGRAPHIC COMMITMENT IN A NETWORK” U.S. Patent 6,301,664.
4. Rafail OSTROVSKY And Yuval RABANI, ”METHOD AND SYSTEM FOR DETERMINING APPROXIMATE HAMMING DISTANCE AND APPROXIMATE NEAREST NEIGHBORS IN AN ELECTRONIC STORAGE DEVICE” U.S. Patent 6,226,640.
5. William AIELLO, Rafail OSTROVSKY, And Sachin LODHA “A METHOD FOR EFFICIENTLY REVOKING DIGITAL IDENTITIES” U.S. Patent 6,397,329.
6. Rafail OSTROVSKY, Yuval ISHAI, AND Giovanni DI-CRESCENZO, “METHOD AND SYSTEM FOR PRIVATE INFORMATION RETRIEVAL USING COMMODITIES” U.S. Patent 6,216,128.
7. Rafail OSTROVSKY, Yuval ISHAI, AND Giovanni DI-CRESCENZO, “SYSTEM AND METHOD FOR PRIVATE INFORMATION RETRIEVAL USING VERIFIABLE COMMODITIES” U.S. Patent 6,438,554.
8. Giovanni DI-CRESCENZO, AND Rafail OSTROVSKY AND S. RAJAGOPALAN “METHOD AND SYSTEM FOR TIMED-RELEASE PUBLIC-KEY ENCRYPTION” U.S. Patent 6,813,358.
9. Rafail OSTROVSKY AND Yuval RABANI METHOD FOR LOW DISTORTION EMBEDDING OF EDIT DISTANCE TO HAMMING DISTANCE. (application) US Pat. 11,816,890 - Filed Feb 28, 2006.
10. Rafail OSTROVSKY AND William E. SKEITH III METHOD FOR PRIVATE KEYWORD SEARCH ON STREAMING DATA (application) US Pat. 11,816,849 - Filed Feb 28, 2006.

**Patents  
(cont.)**

11. Yair AMIR AND Paul BUNN and Rafail OSTROVSKY AUTHENTICATED ADVERSARIAL ROUTING (application) US Pat. 12,922,141 - Filed Mar 13, 2009.

**Recent  
Invited  
Talks**

- Invited Scholar: U.S. Air Force Third Annual National Security Scholars Conference. April 26, 2011. (Invited by the Honorable Michael B. Donley, Secretary of the Air Force.)
- Invited talk: Mathematics of Information-Theoretic Cryptography IPAM, UCLA, March 3, 2011.
- Invited talk: Trends in Theoretical Cryptography (TTC 2011) January 10-12, 2011, Tsinghua University, Beijing, China.
- Invited talk: MIT CSAIL Theory Colloquium December 7, 2010.
- Invited talk: MIT Quantum Information Processing (QIP) seminar, December 6, 2010.
- Invited talk: Caltech Computing and Mathematical Sciences Lecture Series November 17, 2010.
- Invited talk: Aerospace Corporation Information Assurance Technology Department, Computers and Software Division, October 7, 2010.
- Invited talk: 2010 Lockheed-Martin Anti-Tamper Conference, August 26, 2010, Fort Worth, Texas.
- Invited talk: 2009 Workshop on Cryptographic Protocols and Public-Key Cryptography May 24-29 2009, Bertinoro, Italy.
- Distinguished Lecturer Seminar Series, U.C. Irvine Computer Science Department, May 15, 2009.
- Plenary invited speaker at International Conference on Cyber Security 2009 organized by FBI and Fordham university.
- Plenary keynote speaker at PKC-2007 International Workshop on Practice and Theory in Public Key Cryptography, China 2007.
- Invited talk: Sun Microsystems, 2007 Distinguished Lecture Series, January 2007, Palo Alto, CA, USA
- Invited tutorial: Series of IPAM lectures on Private Information Retrieval September 2006, Los Angeles, CA, USA.
- Two invited tutorials at Homeland Defense and Security Conference 18-21 October 2006, Sorrento, Italy.
- Invited talk: 2006 Xerox Corporation Distinguished Lecture Series Los Angeles, July 2006. USA
- Invited talk: Workshop on Data Surveillance and Privacy Protection Workshop Harvard, June 2006.

**Recent  
Invited  
Talks (\*)**

- Invited talk: Workshop on classical and quantum information security, Caltech, December 15-18, 2005.
- Invited talk: Interdepartmental Seminar on Algorithmics University of Rome “La Sapienza”, Italy. November 21, 2005.
- Invited talk: 2005 Distinguished Cryptographer Lecture Series NTT Labs, Kanagawa, Japan, October 2005.
- Invited talk: Workshop on Cryptography and Information Security 2005 Tokyo, Japan, October 21, 2005.
- Invited talk: IEEE Information Theory Workshop on Theory and Practice in Information-Theoretic Security Awaji Island, Japan, October 16- 19, 2005.
- Invited talk: Dagshtul Workshop. Germany, October 9-14, 2005.
- Invited talk: Southern California Security and Cryptography Workshop September 24, 2005, Irvine, CA. USA
- Invited talk: Bertinoro Invited one-week course, International PhD School on Mathematical Aspects of Modern Cryptography, Bertinoro, Italy September 4-9, 2005.

**Funding**

- National Science Foundation awards:
  - (1992) DMS-9206267;
  - (2004) CNS-0430254;
  - (2007) CNS-0716835;
  - (2007) CNS-0716389;
  - (2008) CNS-0830803;
  - (2009) CCF-0916574
- US-Israel Binational Science Foundation awards:
  - (2002) BSF-2002354;
  - (2008) BSF-2008411;
- (2003) Intel Corporation;
- (2004) OKAWA Foundation;
- (2005) B. John Garrick Foundation;
- (2005) Teradata Corporation;
- (2006) IBM;
- (2006) Xerox Corporation.
- (2007) UC Microelectronics Innovation and Computer Research grants;
- (2007) Lockheed-Martin Corporation;
- (2011) DARPA;

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(\*) I did not keep detailed notes of my talks prior to September 2005, the ballpark is over a hundred talks from 1989 to 2005.

## Publications

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### Books

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- [1] Rafail Ostrovsky. *Software protection and simulation on oblivious RAMs*. Thesis (Ph. D.)—Massachusetts Institute of Technology, Dept. of Electrical Engineering and Computer Science, 1992.
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### Book Editor

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- [2] Shlomi Dolev, Rafail Ostrovsky, and Andreas Pfitzmann, editors. *Anonymous Communication and its Applications, 09.10. - 14.10.2005*, volume 05411 of *Dagstuhl Seminar Proceedings*. Internationales Begegnungs- und Forschungszentrum für Informatik (IBFI), Schloss Dagstuhl, Germany, 2006.
- [3] Shlomi Dolev, Andreas Pfitzmann, and Rafail Ostrovsky. 05411 abstracts collection – anonymous communication and its applications. In *Anonymous Communication and its Applications, Schloss Dagstuhl, Germany*, 2005.
- [4] Rafail Ostrovsky, Roberto De Prisco, and Ivan Visconti, editors. *Security and Cryptography for Networks, 6th International Conference, SCN 2008, Amalfi, Italy, September 10-12, 2008. Proceedings*, volume 5229 of *Lecture Notes in Computer Science*. Springer, 2008.
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### Book Chapters

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- [5] Allan Borodin, Rafail Ostrovsky, and Yuval Rabani. In *Discrete and Computational Geometry - The Goodman-Pollack Festschrift. Algorithms and Combinatorics Series 3143*, chapter Lower Bounds for High Dimensional Nearest Neighbor Search and Related Problems, pages 255–276. Springer Verlag, Berlin, 2003.
- [6] Rafail Ostrovsky and William E. Skeith III. Private Information Retrieval: Single-Database Techniques and Applications. In G. Franceschetti and M. Grossi, editors, *Home-land Security Technology Challenges*, pages 143–176. Artech House Publishing, 2008.
- [7] Rafail Ostrovsky, Ramarathnam Venkatesan, and Moti Yung. Fair Games Against an All-Powerful Adversary (preliminary version). In Renato M. Capocelli, Alfredo De Santis, and Ugo Vaccaro, editors, *Sequences II: Communication, Security, and Computer Science*, pages 418–429. Springer-Verlag, 1991. From International Advanced Workshop. Sequences II, Positano, Italy, June 1991. Prior to Positano, this work was first presented at DIMACS Complexity and Cryptography Workshop, October 1990, Princeton, NJ.
- [8] Rafail Ostrovsky, Ramarathnam Venkatesan, and Moti Yung. Fair Games Against an All-Powerful Adversary (full version). In Jin-Yi Cai, editor, *DIMACS Series in Discrete Mathematics and Theoretical Computer Science, Vol. 13*, pages 155–169. AMS, 1993. This

work was first presented at DIMACS Complexity and Cryptography Workshop, October 1990, Princeton, NJ.

- [9] Rafail Ostrovsky and Moti Yung. On necessary conditions for secure distributed computing. In *DIMACS Workshop on Distributed Computing and Cryptography*, Feigenbaum and Merritt (eds.), AMS, pages 229–234. 1990.

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## Journal Publications

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- [10] William Aiello, Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Adaptive packet routing for bursty adversarial traffic. *J. Comput. Syst. Sci.*, 60(3):482–509, 2000.
- [11] Allan Borodin, Rafail Ostrovsky, and Yuval Rabani. Stability preserving transformations: Packet routing networks with edge capacities and speeds. *Journal of Interconnection Networks*, 5(1):1–12, 2004.
- [12] Allan Borodin, Rafail Ostrovsky, and Yuval Rabani. Subquadratic approximation algorithms for clustering problems in high dimensional spaces. *Machine Learning*, 56(1-3):153–167, 2004.
- [13] Vladimir Braverman and Rafail Ostrovsky. Effective computations on sliding windows. *SIAM J. Comput.*, 39(6):2113–2131, 2010.
- [14] Ran Canetti, Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Randomness versus fault-tolerance. *J. Cryptology*, 13(1):107–142, 2000.
- [15] Nishanth Chandran, Ryan Moriarty, Rafail Ostrovsky, Omkant Pandey, Mohammad Ali Safari, and Amit Sahai. Improved algorithms for optimal embeddings. *ACM Transactions on Algorithms*, 4(4), 2008.
- [16] Julia Chuzhoy, Rafail Ostrovsky, and Yuval Rabani. Approximation algorithms for the job interval selection problem and related scheduling problems. *Math. Oper. Res.*, 31(4):730–738, 2006.
- [17] Giovanni Di Crescenzo, Yuval Ishai, and Rafail Ostrovsky. Universal service-providers for private information retrieval. *J. Cryptology*, 14(1):37–74, 2001.
- [18] Yevgeniy Dodis, Rafail Ostrovsky, Leonid Reyzin, and Adam Smith. Fuzzy extractors: How to generate strong keys from biometrics and other noisy data. *SIAM J. Comput.*, 38(1):97–139, 2008.
- [19] Shlomi Dolev and Rafail Ostrovsky. Xor-trees for efficient anonymous multicast and reception. *ACM Trans. Inf. Syst. Secur.*, 3(2):63–84, 2000.
- [20] Matthias Fitzi, Juan A. Garay, Ueli M. Maurer, and Rafail Ostrovsky. Minimal complete primitives for secure multi-party computation. *J. Cryptology*, 18(1):37–61, 2005.

- [21] Oded Goldreich and Rafail Ostrovsky. Software protection and simulation on oblivious rams. *J. ACM*, 43(3):431–473, 1996.
- [22] Oded Goldreich, Rafail Ostrovsky, and Erez Petrank. Computational complexity and knowledge complexity. *SIAM J. Comput.*, 27(4):1116–1141, 1998.
- [23] Yuval Ishai, Eyal Kushilevitz, Rafail Ostrovsky, and Amit Sahai. Zero-knowledge proofs from secure multiparty computation. *SIAM J. Comput.*, 39(3):1121–1152, 2009.
- [24] Jonathan Katz, Rafail Ostrovsky, and Moti Yung. Efficient and secure authenticated key exchange using weak passwords. *J. ACM*, 57(1), 2009.
- [25] Joe Kilian, Eyal Kushilevitz, Silvio Micali, and Rafail Ostrovsky. Reducibility and completeness in private computations. *SIAM J. Comput.*, 29(4):1189–1208, 2000.
- [26] Eyal Kushilevitz, Nathan Linial, and Rafail Ostrovsky. The linear-array conjecture in communication complexity is false. *Combinatorica*, 19(2):241–254, 1999.
- [27] Eyal Kushilevitz, Rafail Ostrovsky, and Yuval Rabani. Efficient search for approximate nearest neighbor in high dimensional spaces. *SIAM J. Comput.*, 30(2):457–474, 2000.
- [28] Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Log space polynomial end to end communication. *SIAM J. Comput.*, 27(6):1531–1549, 1998.
- [29] Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Characterizing linear size circuits in terms of privacy. *J. Comput. Syst. Sci.*, 58(1):129–136, 1999.
- [30] Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Amortizing randomness in private multiparty computations. *SIAM J. Discrete Math.*, 16(4):533–544, 2003.
- [31] Shay Kutten, Rafail Ostrovsky, and Boaz Patt-Shamir. The las-vegas processor identity problem (how and when to be unique). *J. Algorithms*, 37(2):468–494, 2000.
- [32] Steve Lu, Daniel Manchala, and Rafail Ostrovsky. Visual cryptography on graphs. *J. Comb. Optim.*, 21(1):47–66, 2011.
- [33] Alain J. Mayer, Rafail Ostrovsky, Yoram Ofek, and Moti Yung. Self-stabilizing symmetry breaking in constant space. *SIAM J. Comput.*, 31(5):1571–1595, 2002.
- [34] Moni Naor, Rafail Ostrovsky, Ramarathnam Venkatesan, and Moti Yung. Perfect zero-knowledge arguments for  $np$  using any one-way permutation. *J. Cryptology*, 11(2):87–108, 1998.
- [35] Rafail Ostrovsky and William E. Skeith III. Private searching on streaming data. *J. Cryptology*, 20(4):397–430, 2007.
- [36] Rafail Ostrovsky and Yuval Rabani. Polynomial-time approximation schemes for geometric min-sum median clustering. *J. ACM*, 49(2):139–156, 2002.

- [37] Rafail Ostrovsky and Yuval Rabani. Low distortion embeddings for edit distance. *J. ACM*, 54(5), 2007.
- [38] Rafail Ostrovsky, Yuval Rabani, and Leonard J. Schulman. Error-correcting codes for automatic control. *IEEE Transactions on Information Theory*, 55(7):2931–2941, 2009.

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## Refereed Conference Proceedings

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- [39] William Aiello, Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Adaptive packet routing for bursty adversarial traffic. In *STOC*, pages 359–368, 1998.
- [40] William Aiello, Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Dynamic routing on networks with fixed-size buffers. In *SODA*, pages 771–780, 2003.
- [41] William Aiello, Sachin Lodha, and Rafail Ostrovsky. Fast digital identity revocation. In *CRYPTO*, pages 137–152, 1998.
- [42] Noga Alon, Manuel Blum, Amos Fiat, Sampath Kannan, Moni Naor, and Rafail Ostrovsky. Matching nuts and bolts. In *SODA*, pages 690–696, 1994.
- [43] Yair Amir, Paul Bunn, and Rafail Ostrovsky. Authenticated adversarial routing. In *TCC*, pages 163–182, 2009.
- [44] Baruch Awerbuch and Rafail Ostrovsky. Memory-efficient and self-stabilizing network reset. In *PODC*, pages 254–263, 1994.
- [45] Mihir Bellare, Silvio Micali, and Rafail Ostrovsky. Perfect zero-knowledge in constant rounds. In *STOC*, pages 482–493, 1990.
- [46] Mihir Bellare, Silvio Micali, and Rafail Ostrovsky. The (true) complexity of statistical zero knowledge. In *STOC*, pages 494–502, 1990.
- [47] Dan Boneh, Giovanni Di Crescenzo, Rafail Ostrovsky, and Giuseppe Persiano. Public key encryption with keyword search. In *EUROCRYPT*, pages 506–522, 2004.
- [48] Dan Boneh, Shai Halevi, Michael Hamburg, and Rafail Ostrovsky. Circular-secure encryption from decision diffie-hellman. In *CRYPTO*, pages 108–125, 2008.
- [49] Dan Boneh, Eyal Kushilevitz, Rafail Ostrovsky, and William E. Skeith III. Public key encryption that allows pir queries. In *CRYPTO*, pages 50–67, 2007.
- [50] Allan Borodin, Rafail Ostrovsky, and Yuval Rabani. Lower bounds for high dimensional nearest neighbor search and related problems. In *STOC*, pages 312–321, 1999.
- [51] Allan Borodin, Rafail Ostrovsky, and Yuval Rabani. Subquadratic approximation algorithms for clustering problems in high dimensional spaces. In *STOC*, pages 435–444, 1999.
- [52] Allan Borodin, Rafail Ostrovsky, and Yuval Rabani. Stability preserving transformations: packet routing networks with edge capacities and speeds. In *SODA*, pages 601–610, 2001.

- [53] Xavier Boyen, Yevgeniy Dodis, Jonathan Katz, Rafail Ostrovsky, and Adam Smith. Secure remote authentication using biometric data. In *EUROCRYPT*, pages 147–163, 2005.
- [54] Milan Bradonjic, Eddie Kohler, and Rafail Ostrovsky. Near-optimal radio use for wireless network synchronization. In *ALGOSENSORS*, pages 15–28, 2009.
- [55] Vladimir Braverman, Kai-Min Chung, Zhenming Liu, Michael Mitzenmacher, and Rafail Ostrovsky. Ams without 4-wise independence on product domains. In *STACS*, pages 119–130, 2010.
- [56] Vladimir Braverman, Adam Meyerson, Rafail Ostrovsky, Alan Roytman, Michael Shindler, and Brian Tagiku. Streaming k-means on well-clusterable data. In *SODA*, pages 26–40, 2011.
- [57] Vladimir Braverman and Rafail Ostrovsky. Smooth histograms for sliding windows. In *FOCS*, pages 283–293, 2007.
- [58] Vladimir Braverman and Rafail Ostrovsky. Measuring independence of datasets. In *STOC*, pages 271–280, 2010.
- [59] Vladimir Braverman and Rafail Ostrovsky. Zero-one frequency laws. In *STOC*, pages 281–290, 2010.
- [60] Vladimir Braverman, Rafail Ostrovsky, and Carlo Zaniolo. Optimal sampling from sliding windows. In *PODS*, pages 147–156, 2009.
- [61] Paul Bunn and Rafail Ostrovsky. Secure two-party k-means clustering. In *ACM Conference on Computer and Communications Security*, pages 486–497, 2007.
- [62] Paul Bunn and Rafail Ostrovsky. Asynchronous throughput-optimal routing in malicious networks. In *ICALP (2)*, pages 236–248, 2010.
- [63] Ran Canetti, Cynthia Dwork, Moni Naor, and Rafail Ostrovsky. Deniable encryption. In *CRYPTO*, pages 90–104, 1997.
- [64] Ran Canetti, Eyal Kushilevitz, Rafail Ostrovsky, and Adi Rosén. Randomness vs. fault-tolerance. In *PODC*, pages 35–44, 1997.
- [65] Ran Canetti, Yehuda Lindell, Rafail Ostrovsky, and Amit Sahai. Universally composable two-party and multi-party secure computation. In *STOC*, pages 494–503, 2002.
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