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Senior Research Scientist
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### **Education**

École Polytechnique Fédérale de Lausanne (EPFL), Switzerland, PhD, Electrical Engineering, 1995

MIT, Master of Science, Computer Graphics, 1978

MIT, Bachelor of Science, Electrical Engineering, 1971

# Massachusetts Institute of Technology (MIT, a teaching and research university)

Media Laboratory, Associate Director, 2008-present

Media Laboratory, Associate Director, 1987-2000

Massachusetts Institute of Technology, Senior Research Scientist, 2000-present

Media Laboratory, Graduate Officer, Media Arts and Sciences, 2002-2007

Massachusetts Institute of Technology, Principal Research Scientist, 1995-2000

Media Laboratory, Associate Director and Lecturer, 1987-2000

Media Laboratory, NEC Career Development Professor of Computers and Communications, 1985-1986

Architecture Machine Group, Associate Professor, 1983-1987

Architecture Machine Group, Assistant Professor, 1980-83

Architecture Machine Group, Research Associate, 1977-80

Architecture Machine Group, Research Assistant, 1976-77

Architecture Machine Group, Technical Instructor, 1975-76

Architecture Machine Group, Technical Assistant, 1971-75

### Other Professional Experience

Frontiers in Blockchain, Associate Editor, 2018-2020

IEEE Blockchain Newsletter Editorial Board, 2018-2020

Dell EMC Technology Advisory Board, 2013-2020

Member, Nokia Siemens Networks, now Nokia, Customer Advisory Board, 2013-2015



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### ANDREW B. LIPPMAN

### Curriculum Vitae

Diamond Management & Technology Consultants (PwC since 2012) Fellow, 1999-present

Nortel Visiting Fellow, 2007-2008

École Polytechnique Fédérale de Lausanne, Switzerland, Visiting Professor of Electrical Engineering, 1995



### **Publications**

"Invertable Frowns: Video-to-Video Facial Emotion Translation," I. Magnusson, A. Sankaranarayanan, A. Lippman, Association for Computing Machinery (ACM) proceedings and Digital Library, September 2021.

"The Presidential Deepfakes Dataset," A. Sankaranarayanan, M. Groh, R. Picard, A. Lippman, IJCAI Workshop on Adverse Impacts and Collateral Effects of Artifical Intelligence Technologies, August 2021.

"MedRec: A Network for Personal Information Distribution," A. Lippman, A. Cameron, K. Retzepi, N. Nchinda, ICNC 2019 Technical Program, Honolulu, HI, February 2019.

"Bitcoin and the Myth of Decentralization: Socio-technical Proposals for Restoring Network Integrity," A. Ekblaw and A. Lippman, IEEE SASO (Self-Adaptive Self-Organizing Systems), Foundations and Applications of Self\* Systems, IEEE International Workshops, IEEE, 2016.

"8K Time into Space: Web-based Interactive Storyboard with Playback for Hundreds of Videos," H. Ohmata and A. Lippman, 2016 IEEE International Symposium on Multimedia (ISM), San Jose, CA, December 2016.

"MedRec: Using Blockchain for Medical Data Access and Permission Management," A. Azaria, A. Ekblaw, T. Vieira, A. Lippman. Second International Conference on Open and Big Data (OBD 2016), IEEE, 2016.

"Five Principles for an Open Internet," editorial, The Boston Globe, July 30, 2014.

"CoCam: A collaborative content sharing framework based on opportunistic P2P networking," E. Toledano, D. Sawada, A. Lippman, H. Holtzman, F. Casalegno. Consumer Communications and Networking Conference (CCNC), 2013 IEEE, January 2013.

"Barter - Mechanism Design of A Market-incented Wisdom Exchange for Organizations and Communities," D. Shen, M. Van Alstyne, A. Lippman. Workshop on Social Computing and User Generated Content, ACM Conference on Electronic Commerce, San Jose, CA, June, 2011.

"Barter - Mechanism Design for a Market Incented Wisdom Exchange," D. Shen, M. Van Alstyne, A. Lippman, H. Benbya. ACM Conference on Computer Supported Cooperative Work (CSCW), Seattle, WA, February, 2012.

"Design of Currency, Markets, and Economy for Knowledge," D. Shen, A. Pentland, M. Van Alstyne, A. Lippman. "Design of Currency, Markets, and Economy for Knowledge" Workshop on Information in Networks (WIN), New York, NY, September, 2012.

"The Impacts of Just-In-Time Social Networks on People's Choices in the Real World," K.H. Lee, A. Lippman, A. Pentland, E. Dugundji. The Third IEEE International Conference on Social Computing. October 9-11, 2011.

"The Glass Infrastructure: Using Common Sense to Create a Dynamic, Place-Based Social Information System," C. Havasi, R. Borovoy, B. Kizelshteyn, P. Ypodimatopoulos, J. Ferguson, H. Holtzman, A. Lippman, D. Schultz, M. Blackshaw, G. Elliott, C. Ng, Innovative Applications of Artificial Intelligence, Twenty-Third IAAI Conference, San Francisco, August, 2011.

"The Effects of Just-In-Time Social Networks on People's Choices in the Real World," K.H. Lee, A. Lippman, A. Pentland. Interdisciplinary Workshop on Information and Decision in Social Networks (WIDS). May 31-June 1, 2011.



- "X-Ray Audio," A. Lippman, B. Kizelshteyn, V. Hung, Proceedings of Interacting with Sound Workshop: Exploring Context-Aware, Local and Social Audio Applications, IwS '11, ACM, New York, NY.
- "Open Transaction Network: Connecting Communities of Experience through Mobile Transactions," K.H. Lee, D. Shen, A. Lippman, E. Ross. The Second International Conference on Mobile Computing, Applications and Services (MobiCASE 2010). October 25~27, 2010.
- "Follow Me: A Web-Based, Location-Sharing Architecture for Large, Indoor Environments," P. Ypodimatopoulos, A. Lippman. 19<sup>th</sup> International World Wide Web Conference, WWW2010, Raleigh, NC, April 2010.
- "Simple, Zero-Feedback, Distributed Beamforming with Unsynchronized Carriers," A. Bletsas, A. Lippman, J. Sahalos. IEEE JSAC Special Issue, to be published 2010.
- "Simple, Zero-Feedback, Collaborative Beamforming for Emergency Radio," A. Bletsas, A. Lippman, J. Sahalos, The Sixth International Symposium on Wireless Communication Systems 2009 (ISWCS'09) Siena-Tuscany, University of Siena, Italy, September, 2009.
- "What Can Failures Teach Us?" A. Lippman, Editorial, The Boston Globe, July 19, 2009.
- "Separation of Multiple Passive RFID Signals Using Software Defined Radio," D. Shen, G. Woo, D.P. Reed, A. Lippman, IEEE RFID 2009, Orlando, FL.
- "On Frame Synchronization for Multiple Access Channels," D. Shen, W. Zhang, D.P. Reed, A. Lippman, IEEE ICC MACOM 2009, Dresden, Germany.
- "Connected Consumption: The Hidden Networks of Consumption," K.H. Lee, D. Shen, D.P. Reed, A. Lippman, H. Schumacher, IEEE CCNC 2009, Las Vegas.
- "Minimum Energy Cooperative Path Routing in All-Wireless Networks: NP-Completeness and Heuristic Algorithms", F. Li, K. Wu, A. Lippman, Journal of Communications and Networks (JCN), special issue on Cooperative Transmission and its Applications, June 2008.
- "Presence Information in Mobile Mesh Networks," P.P. Ypodimatopoulos, D..P. Reed, A. Lippman, M. Bletsas, Consumer Communications and Networking Conference, 2008. CCNC 2008. 5th IEEE
- "Demonstrating SnapN'Share: Content Sharing Over a Socially Informed, Hyper-Local, Face-to-Face Networking Platform," Nadav Aharony, Andrew Lippman and David P. Reed, CCNC IEEE 2008; Las Vegas, NV.
- "Performance Evaluation of EVRC-Encoded Voice Traffic Over CDMA EVDO, Rev. A," A. Lippman, F. Li, P. Fleming, E. Chan, I. Vokovic, I. Filipovich, Proceeding of the IEEE Wireless Telecommunications Symposium 2007 MIT Media Laboratory and Motorola, Inc., April 2007. Also published in Wireless Technology: Applications, Management, and Security, Springer press, 2007
- "The New Age of Wireless," A. Lippman, Scientific American, Vol. 295, No. 4, October 2006.
- "Energy-Efficient Cooperative Routing in Multi-hop Wireless Ad Hoc Networks", F. Li, K. Wu, A. Lippman, in the proceeding of the 25th IEEE International Performance Computing and Communications Conference (IEEE IPCCC '2006), Phoenix, Arizona, April, 2006.



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### **Curriculum Vitae**

- "Cooperative Diversity with Opportunistic Relaying," A. Bletsas, H. Shin, M. Win and A. Lippman. IEEE Wireless Communications & Networking Conference, Las Vegas, April 2006.
- "A Simple Cooperative Diversity Method Based on Network Path Selection," A. Bletsas, A. Khisti, A., D.P. Reed, A. Lippman, A., IEEE Journal on Selected Areas in Communications, Volume 24, Issue 3, Pages: 659-672, March 2006.
- "Reclaiming the Vast Wasteland: Why Unlicensed Use of the White Space in the TV Bands Will Not Cause Interference to DTV Viewers," Marcus, M., Kolodzy, P. and Lippman, A. New America Foundation, Wireless Future Program, Issue Brief #17, October 2005.
- "Probabilistic Optimization for Energy-Efficient Broadcast in All-Wireless Networks", F. Li, S. Mannor and A. Lippman, Proc 39th Annual Conference on Information Systems and Sciences (CISS'2005), Baltimore, MD, March 2005.
- "Spontaneous Synchronization in Multi-hop Embedded Sensor Networks: Demonstration of a Server-free Approach," Bletsas A. and A. Lippman, Second European Workshop on Wireless Sensor Networks, January 31 February 2, 2005, Istanbul, Turkey.
- "A Multi-resolution Manifold Distance for Invariant Image Similarity," Vasconcelos, N. and A. Lippman, IEEE Transactions on Multimedia, vol. 7, n. 1, pp. 127-142, February 2005.
- "A Simple Distributed Method for Relay Selection in Cooperative Diversity Wireless Networks, Based on Reciprocity and Channel Measurements," Bletsas, A., Lippman, A., and Reed, D. P., IEEE 61st Semiannual Vehicular Technology Conference, May 30-June 1, 2005, Stockholm, Sweden.
- "Viral Radio," Lippman, A., and Reed, D.P., BT Technology Journal, vol 22, No 4, ppg 13-24, October, 2004.
- "Random Tree Optimization for Energy Efficient Broadcast in All-Wireless Networks," F. Li, S. Mannor, A. Lippman, IEEE International Conference on Sensor and Ad Hoc Communication and Networks (IEEE SECON'04), CA, USA, Oct. 2004.
- "Toward Minimum-Interference and Minimum-Energy Broadcast in All-Wireless Networks," Li, F., Lippman, A., Proc 38th Annual Conference on Information Systems and Sciences (CISS'2004), NJ, March 2004.
- "Efficient Collaborative (Viral) Communication in OFDM Based WLANs," Bletsas, A. and Lippman, A., Proceedings of the International Symposium on Advanced Radio Technologies," March 2003.
- "All Together Now," A. Lippman, CONTEXT, Winter 2002/2003.
- "A Multicast Transport Protocol for Cooperative Media Distribution," Vyzovitis, D. and Lippman, A. Extended Abstract, Proc. 10th IEEE International Conference on Network Protocols (ICNP 2002), Paris, FR, November 2002.
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- "Cooperative Multicast for Scalable Real-Time Media Distribution," Vyzovitis, D. and Lippman, A. MIT Media Laboratory, September 2002.
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