MASSACHUSETTS INSTITUTE OF TECHNOLOGY

School of Architecture and Planning Faculty Personnel Record

Date: January 2017   Full Name: Joseph A. Paradiso

Department: Program in Media Arts and Sciences

1.   **Date of Birth**:   December 20, 1955

2.   **Citizenship**:   USA
     Immigration Status: N/A

3.   **Education:**

School	Degree	Date
MIT	Ph.D. in Physics	May, 1981
Tufts University	BS in Electrical Engineering and Physics	May, 1977

4.   **Title of Thesis for Most Advanced Degree:**

Characteristics of Muon Pair Production in P-P Collisions at Very High Energies as a Probe of Proton Constituents

5.   **Principal Fields of Interest:**

Sensor Networks
Ubiquitous Computing
Energy Management in the Built Environment
Human-Computer Interaction (HCI)

6.   **Name and Rank of Other Departmental Faculty in Same Field:** None

7.   **Name and Rank of Faculty of Other Departments in Similar Fields:**

8.   **Non-MIT Experience (including military service):**

Employer	Position	Beginning	Ending
Draper Laboratory Sensor and Signal Processing Directorate	Technical Staff	4/89	7/94
Swiss Federal Institute of Technology (ETH Zurich) Lab for High Energy Physics	Visiting Scientist	8/92	10/92
Swiss Federal Institute of Technology (ETH Zurich) Lab for High Energy Physics	Visiting Scientist	10/91	12/91
Draper Laboratory Control and Decision Systems Directorate	Technical Staff	2/84	4/89
Swiss Federal Institute of Technology (ETH Zurich) Lab for Nuclear Physics	Postdoc	11/81	12/83
Brookhaven National Laboratory Instrumentation Laboratory	Consulting Physicist	7/81	10/81

| Draper Laboratory | Engineering Aide, Summer Staff | 6/74 | 9/77 |

9.   History of MIT Appointments:

Department	Rank	Beginning	Ending
Media Arts and Sciences	Professor	7/15	present
Media Arts and Sciences	Associate Prof. w. Tenure	7/07	7/15
Media Arts and Sciences	Associate Professor	7/02	7/07
Media Arts and Sciences	Principal Research Scientist	7/98	7/02
Media Arts and Sciences	Research Scientist	7/94	7/98
Media Arts and Sciences	Research Affiliate	1/93	7/94
Physics Department	Compton Fellow	9/77	9/80

10.   Consulting Record:

Firm	Beginning	Ending
Morrison & Foerster LLP (Technical Expert)	10/16	11/16
Gibson, Dunn & Crutcher LLP (Technical Expert)	7/15	5/16
Banner & Witcoff, Ltd (Technical Expert)	8/14	11/14
Weil, Gotshal & Manges LLP (Technical Expert)	7/14	4/16
Moog Music Inc. (organized daylong seminar on research in electronic music at MoogFest 2014)	4/14	4/14
Durie Tangri LLP (Technical Expert)	3/14	present
Samsung Electronics (SRFC Expert Reviewer)	2/14	present
Transitio Mexico City (electronic music seminar series)	10/11	10/11
Nokia Research (visiting researcher at NRC Santa Monica)	7/11	8/11
Swedish Foundation for Strategic Research (expert reviewer)	11/10	12/10
Microsoft (visiting researcher at MSR Cambridge UK)	7/10	8/10
Nokia Research Center Activity Review Panel	12/09	12/09
UPF Barcelona (invited week-long seminar series)	4/09	4/09
Microsoft Corp. (Distinguished ALT-TAB for Mobility)	4/08	5/08
Swedish Foundation for Strategic Research (expert reviewer)	3/08	4/08
A.I.E.P. Milano (Seminar series on computer music)	2/07	2/07
Hermann Miller, Inc.	1/05	8/06
Senera Corporation (Technology Advisory Board)	7/03	7/04
Synectics, Inc.	7/04	7/04
Swedish Foundation for Strategic Research (onsite evaluation)	5/03	5/03
MediaLabEurope, Dublin	6/01	6/02
Diller and Scofidio (architects)	6/00	6/02
University of Limerick (Ireland), External Examiner for Graduate Program in Interactive Media	9/99	9/04
IBM T.J. Watson Research Center	1/99	7/99
British Telecom	4/97	3/99
Fibersense, Inc. (Technology Board Member)	4/97	4/98
Takata Inc., Automotive Systems Laboratory	11/96	12/96
Boston University Photonics Center	11/95	12/95

Optron Systems, Inc.	12/93	4/94
Lyle Mays, Inc.	5/87	12/90
Draper Laboratory	1/78	6/78

11. Department and Institute Committees, Other Assigned Duties

Activity	Beginning	Ending
MIT 'Engine' Conflict of Interest Working Group	12/17	Present
MIT ACT (Art, Culture, Technology) Faculty Search Committee	9/16	Present
James R. Killian Jr. Faculty Achievement Award		
Selection Committee	7/15	7/17
Selection Committee Chair	7/16	7/17
Undergraduate Advisor	8/14	present
MIT Committee for Launch of the Capital Campaign	6/14	6/14
Music and Theater Arts Faculty Search Committee	1/14	present
Media Arts and Sciences Faculty Search Committee	11/13	present
MIT CUP (Committee on the Undergraduate Program)	9/12	9/15
MIT Committee on Intellectual Property	9/10	9/16
Media Lab IP Commission Member	1/11	9/12
MISTI Global Seed Funds Proposal Evaluator	10/13	present
2012 d'Arbeloff Alumni Class Funds Review Committee	10/12	12/12
Senior faculty search committee for faculty in Built Environments	6/10	9/11
Director, IPCOM (Media Lab Intellectual Property Committee)	1/10	7/13
Manager, Media Lab 'HowTo' orientation seminar for new RAs	9/09	1/13
2020 Committee: Vision for Shared Materials Facilities	7/08	7/09
Technology Broadcasting Corporation Board Member	1/06	present
Horowitz Award Selection Committee (Dept. of Architecture)	5/04	5/06
Media Lab Intellectual Property Committee (IPCOM)	9/03	05/05
MAS Departmental Committee on Graduate Students	8/03	8/04
Deshpande Center Proposal Reviewer	8/03	9/03
IPCOM (Media Lab Intellectual Property Committee)	11/02	present
Media Arts and Sciences Faculty Search Committee	9/02	6/05
Co-Director, Things That Think Consortium (Media Lab)	7/02	present
MAS Departmental Committee on Graduate Students	8/00	8/01
Technology Director, Things That Think Consortium (Media Lab)	1/96	5/01

12. Government and Other Outside Committees, Service, etc.:

Committee	Beginning	Ending
Scientific Evaluator, The Hasler Foundation (Switzerland)	12/15	1/16
TPC member: NextMote workshop at EWSN 2016	9/15	1/16
Judge, Guthman Competition, Georgia Tech Music Dept.	2/15	2/15
Strategies In Light Industrial Conference (Advisory Board)	5/15	5/16
Baylor University (External Proposal Reviewer)	4/14	5/14
Appointment Advisory Committee, Faculty of Radiation Science, TU Delft	4/14	5/14
White House Cities, Counties and States Climate Data Workshop	3/14	3/14
World Bank Workshop on Building Climate and Disaster Resilience through Open Data and Innovation	3/14	3/14
AMI'13 (Intl. Conf. on Ambient Intelligence) TPC	6/13	12/13
Habilitation (HRD) Committee, University Pierre et Marie Curie, (CEA) Paris	12/13	12/13
NSF Workshop on Future Directions in Wireless Networking	11/13	11/13
Board of Advisors - Intel Science and Technology Center for Pervasive Computing (ISTC-PC) at U. Washington	5/13	present
International Advisory Board, Centre for Interdisciplinary Research in Music Media and Technology (CIRMMT), Montreal	5/13	5/14
ESPRC (UK) Proposal Reviewer	12/12	1/13
Scientific Advisory Board for iPack, Swedish Excellence Centre for research and innovation in electronics at KTH	11/12	11/15
NSF Proposal Review Panel	6/12	6/12
NSF Proposal Reviewer	2/12	2/12
European Commission (reviewer for FET projects)	12/11	12/11
NSF Proposal Review Panel	4/11	4/11
Associate TPC Chair for Input Devices Track, CHI 2011	8/10	3/11
TEI 2011 (Intl Conf. on Tangible, Embedded, Embodied Interaction) TPC	6/10	9/10
NIH Workshop on Personal Motion Technologies for Healthy Independent Living	6/10	6/10
Texas Higher Education (Committee to evaluate Proposed Ph.D. in Arts and Technology Degree at UTD)	6/10	6/10
WirelessHealth 2010 TPC	4/10	8/10
Swiss National Science Foundation Proposal Reviewer	12/09	1/10
NSF Workshop on Future Directions in Sensing Systems	11/09	11/09
Associate Editor in Chief, IEEE Pervasive Computing Magazine	4/09	4/15

TPC, BSN (Intl. Conf. on Wearable/Implantable Body Sensor Networks) 2009	1/09	6/09
TPC, ISWC (Wearable Computing Conference) 2009	12/08	9/09
NSF Proposal Review Panel	6/08	6/08
TPC, European Workshop on Sensor Networks (EWSN) '09	5/08	12/08
Guest Editor, IEEE J-SAC Special Issue on BAN (Body Area Networks)	1/08	1/09
IPSN (Intl. Conf. on Information Processing in Sensor Networks) 2008 TPC	8/07	1/08
BodyNets 2008 TPC	7/07	12/07
NSF-IC Power Sources Workshop	4/07	4/07
TPC, ACM MobiEval 2007	2/07	7/07
Editorial Board, ACM/Springer Wireless Networks Journal	2/07	1/09
NSF Workshop on Integrating the Social Sciences into NSF Observatories	1/07	1/07
Co-chair, ISWC 2007 (International Symposium on Wearable Computing)	1/07	10/07
Editorial Board, IEEE Pervasive Computing	9/06	present
Technical Program Committee Co-Chair, The Fourth Workshop on Embedded Networked Sensors (EmNets 2007)	7/06	6/07
Technical Program Committee, Sensor Platform Tools and Design Methods for Networked Embedded Systems (SPOTS), 6'th International IEEE Conference on Information Processing in Sensor Networks (IPSN07)	7/05	5/06
Technical Program Committee, Second International ACM Conference on Body Area Networks (BodyNets 07)	12/06	6/07
Technical Program Committee, 3'rd IEEE/ACM International Conference On Distributed Computing in Sensor Systems DCOSS'07	10/06	6/07
Technical Program Committee, Fourth International Conference on Networked Sensing Systems (INSS 07)	10/06	6/07
Technical Program Committee, 20'th International Conference on Architecture of Computing Systems (ARCS 2007)	7/06	3/07
Technical Program Committee, 4'th International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2007)	6/06	5/07
Steering Committee, IEEE International Conference on Wearable and Implantable Body Sensor Networks (BSN)	6/06	present
Proposal Reviewer, Adventure Fund, Innovative Manufacturing & Construction Research Centre Wolfson School of Mechanical & Manufacturing Engineering, Loughborough University, UK	5/06	6/06

Microelectronics Advisory Council, Fraunhofer Gesellschaft (Germany)	4/06	4/09
Program Committee, (re)Actor: The First International Conference of Digital Live Art	4/06	9/06
Technical Program Committee, ACM Sensys 2006	1/06	9/06
Technical Program Committee, Workshop on World-Sensor-Web (WSW'2006): Mobile Device Centric Sensory Networks and Applications (at ACM Sensys 2006)	1/06	9/06
Singapore Science & Engineering Research Council (SERC) (Proposal Reviewer)	8/05	9/05
Chair, Sensor Platform Tools and Design Methods for Networked Embedded Systems (SPOTS), 5'th International IEEE Conference on Information Processing in Sensor Networks (IPSN06)	7/05	5/06
ERCIM (EU) Beyond-The-Horizon working group on Pervasive Computing & Communications	7/05	12/05
Program Committee, The Fourth International Conference on Pervasive Computing (Pervasive 2006)	7/05	4/06
Co-Chair, IEEE International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2006)	6/05	5/06
Science Foundation Ireland (Proposal Reviewer)	6/05	7/05
External Ph.D. Examiner, National Sensor Center at Dublin City University (DCU)	5/05	6/05
Austrian Science Foundation (Proposal Reviewer)	3/05	4/05
Nokia academic working group on sensor networks	2/05	present
Organizing Committee and Technical Program Committee, Sensor Platform Tools and Design Methods for Networked Embedded Systems (SPOTS), 4'th International IEEE Conference on Information Processing in Sensor Networks (IPSN05)	8/04	4/05
Program Committee, International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2005)	4/04	4/05
Program Committee, Workshop on End-to-End, Sense-and-Respond Systems, Applications, and Services (at ACM MobiSys 2005)	12/04	5/05
Program Committee, 2005 IEE Workshop on Intelligent Environments (IE05)	9/04	6/05
Program Committee, 18'th International Conference on Architecture of Computing Systems (ARCS 2005)	7/04	11/04
Program Committee, The Second International Conference on Pervasive Computing (Pervasive 2004)	10/03	5/04
National Research Council Canada (Proposal Reviewer)	1/04	2/04
Science Foundation Ireland (Proposal Reviewer)	2/04	3/04
National Science Foundation, ECE Division (sensors)		

(Proposal Review Panel in Washington DC)	12/03	12/03
Fonds Québécois de Recherche sur la Société et la Culture, Canada Foundation for Innovation (CFI) (Proposal Review Panel in Montreal)	8/03	8/03
Swedish Foundation for Strategic Research, Visiting Committee Member for 5-year evaluation of all Swedish Interactive Institutes	5/03	6/03
Jury Member, Prix Ars Electronica, Interactive Art Category	3/03	9/03
Guest Editor, *IEEE Computer Graphics and Applications* Special Issue on SIGGRAPH Emerging Technologies	1/03	1/04
Art Interactive Gallery, Cambridge MA (Arts Advisory Board)	7/02	9/07
Program and Steering Committees, Int. Conference on New Interfaces for Musical Expression (NIME 2003-2006)	7/02	Present
Guest Editor, *Journal of New Music Research* Special Issue on New Interfaces for Musical Expression	6/02	6/03
Program Committee, The Second International Conference on Ubiquitous Computing (UbiComp 2002)	3/02	6/02
Chief Organizer, First International Conference on New Interfaces for Musical Expression (NIME 2002)	6/01	6/02
Technical Program Committee, ACM/CHI New Interfaces for Musical Expression Workshop	1/01	5/01
Jury, Emerging Technologies program, ACM SIGGRAPH (member of Jury panel 01,02,03)	1/01	6/03
External Examiner, Interactive Media Program, University of Limerick (Ireland) ('99,00,01,02,03,04)	9/99	9/04
Guest Editor, *IEEE Computer Graphics and Applications*, Special Issue on Input Devices	1/98	6/98
American Institute of Aeronautics and Astronautics (AIAA), Jury for the Columbus 500-year Anniversary Earth-Moon Solar Sail Race	11/89	12/89

Paper Reviewer:

See Program Committee memberships and Guest Editorships above. Some of the other conferences and journals that I've reviewed for include:

IEEE Transactions on Sensor Networks, IEEE Sensors Journal, IEEE Transactions on Robotics, BSN 2006-2013, Pervasive 2012, Pervasive 2006, UbiComp 2014, UbiComp 2010, UbiComp 2009, UbiComp 2008, UbiComp 2006, UbiComp 2005, UbiComp 2004, ACM UIST 2015, UISG 2014, UIST 2012, UIST 2011, UIST 2003, UIST 2002, ACM CHI 2016, ACM CHI 2014, CHI 2013, CHI 2011, ACM CHI 2009, ACM CHI 2002, ACM CHI 2000, TEI 2011, SIGGRAPH 2011, SIGGRAPH 2014, IEEE ISWC (International Symposium for Wearable Computers) 1998, NIME 2002-2014, ACC 1994, IEEE/ASME Trans on Mechatronics, Transactions on Neural Systems & Rehabilitation Engineering, ACM Computing Surveys, Communications of the

ACM, Computer Music Journal, Journal of New Music Research, IBM Systems Journal, IEEE Information Systems, AIAA Journal of Guidance and Control, IEEE Journal of Neural Networks, Pattern Analysis and Applications Journal, Electronics Letters, IEEE Pervasive Computing, Aerospace Science and Technology, IEEE Computer Graphics & Applications

13. **Awards Received:**

Award	Date
Best Paper Award, ACM UIST 2016	10/16
Best Presentation Award, ACM Buildsys 2015	11/15
Alexander W. Dreyfoos (1954) Faculty Chair (MIT)	7/15
Honorable Mention (Best Paper) CHI 2015	5/15
Best Session Paper, BSN 2013	6/13
Best Paper Award, CHI 2013	5/13
Best Demo Award (3rd place) ACM UIST 2012	10/12
IEEE (EMB) Transactions on Information Technology in Biomedicine 2012 Outstanding Paper Award	8/12
Design Contest Winner (ISLPED'08)	8/08
Best Paper Award, ISPN'08 (SPOTS Track)	5/08
Best Presentation Award, ACM Sensys 2007	11/07
Best Paper Award, The 3'rd International Conference on Pervasive Computing (Pervasive 2005)	5/05
Best Paper Award, IPSN'07 (SPOTS Track)	4/07
Best Paper Award, 2003 IEEE International Conference on Sensors (student paper, third prize)	10/03
Sony Career Development Chair (MIT)	9/02
Discover Magazine Award for Technical Innovation (semifinalist, Entertainment category)	6/01
Discover Magazine Award for Technical Innovation (winner, Entertainment category)	6/00
Swets and Zeitlinger Distinguished Paper Award of ICMC 1999 (second prize)	10/99
Draper Laboratory, Recognition Award (for underwater sonar systems)	12/94
Draper Laboratory, Recognition Award (for precision alignment systems in high-energy physics detectors)	7/93
MIT, K.T. Compton Physics Department Fellowship	6/77
Tufts University, BS Summa cum Laude	6/77

Tufts University, Burden Engineering Prize
(first prize, undergraduate engineering competition)   6/77

Tufts University, Alumni Award
(annually presented to 16 students on basis of grades, activities, etc.)   3/77

Tufts University, Class of 1898 Award
(presented to student best displaying competence and capability)   5/76

14. **Current Organization Membership:**

Organization & Offices Held

ACM (Association for Computing Machinery, SIGCHI and SIGGRAPH)
AIAA (American Institute of Aeronautics and Astronautics – Senior member)
APS (American Physical Society)
IEEE (Senior Member)
IEEE Computer Society
IEEE Control Systems Society
IEEE Signal Processing Society
Sigma Xi
Eta Kappa Nu (Tufts University Chapter President, 1976/77)
Tau Beta Pi

15. **Patents and Patent Applications Pending:**

1) Marrin, T., Paradiso. J.A., Machover, T., Verplaetse, C., and Orth, M., "Apparatus for Controlling Continuous Behavior through Hand and Arm Gestures," U.S. Patent No. 5875257, February 23, 1999.

2) Paradiso, J., Hsiao, K., "Multi-axis Tracking of Passive Resonators," U.S. Patent No. 6,404,340, June 11, 2002.

3) Knaian, A., Paradiso, J.A., "Wireless Roadway Monitoring System," U.S. Patent 6,662,099, December 9, 2003.

4) Maue, W.H., Meinzer, R., Paradiso, J., Feldmeier, M., "Self-Powered Wireless Switch," U.S. Patent No. 6,700,310, March 2, 2004.

5) Morrison, G.O., Maue, W.H., Skarb, B.P., Berta, M.J., Meinzer, R., Paradiso, J., Feldmeier, M., Youngs, J., "Self-Powered Wireless Switch," US Patent 6,933,655, August 23, 2005.

6) Paradiso, J.A., Ma, H., Lippman, A.B., "Tag Interrogation With Observable Response Signal," US Patent 7,109,865, September 19, 2006.

7) Paradiso, J.A., Leo, C-K., Checka, N., "Systems and methods for tracking impacts," US Patent 7,643,015 B2, January 5, 2010.

8) Paradiso, J.A., Leo, C-K., Checka, N., "Systems and methods for tracking impacts," US Patent 7916128 B2, March 29, 2011.

9) Ma, H. and Paradiso, J.A., "Input device based on frustrated total internal reflection," US Patent 7,432,893, October 7, 2008.

10) Paradiso, J.A. and Laibowitz, M.J., "Parasitic Mobility in Dynamically Distributed Sensor Networks," US Patent No. 7,429,936, September 30, 2008.

11) Lapenta, J.M. and Paradiso, J.A., "Real-time 3-D Localization using Radar and Surface Acoustic Wave Transponders," US Patent 7,924,160, April 12, 2011.

12) Paradiso, J.A., Ma, H., Lippman, A.B., "Quasi-passive wakeup function to reduce power consumption of electronic devices," U.S. Patent No. 7,864,051, January 4, 2011.

13) Paradiso, J.A., Borque, L.L., "Continuous Capacitive Slider Controller for a Smooth-Surfaced Cooktop," US Patent No. 8,017,890, September 13, 2011.

14) Paradiso, J.A. and Ono, Y., "Distributed acoustic conversation shielding system," US Patent No. 8,229,130, July 24, 2012.

15) Aldrich, M., Feldmeier, M., Paradiso, J., "Apparatus and methods for interactive illumination," US Patent 8,593,073, Nov. 26, 2013.

16) Laibowitz, M., Samanta, V., Paradiso, J.A., "Methods, apparatuses, and computer program products for enabling use of remote devices with pre-defined gestures," U.S. Patent 8,902,180, Dec. 2, 2014.

17) Gong, N.-W., Hodges, S.E., Villar, N., and Paradiso, J.A., "Sensing floor for locating people and devices," U.S. Patent 9,077,343, July 7, 2015.

18) Zoran, A., Paradiso, J., Shilkrot, R., "Methods and Apparatus for Handheld Tool," US Patent 9342632B2, May 17, 2016.

19) Goyal, P. and Paradiso, J., "System for Introspection and Annotation of Electronic Design Data," U.S. Patent No. 9,411,010, August 9, 2016.

20) Goyal, P., Zoran, A., Paradiso, J., "Methods and Apparatus for Handheld Inkjet Printer," U.S. Patent No. 9,446,585, September 20, 2016.

21) Laibowitz, M., Samanta, V., Paradiso, J.A., "Combining device motion and touch input for performing a function," U.S. Patent Application No. 20130154951-A1, Dec. 15, 2011.

22) Laibowitz, M., Samanta, V., Paradiso, J.A., "Performing a Function," US Patent Application 20130154951-A1, Dec. 15, 2011.

23) Paradiso, J., Aldrich, M., Zhao, N., "Methods and Apparatus for Illumination Control," U.S. Patent Application No. 20150257238, March 10, 2015.

24) Azaria, A., Mayton, B., and Paradiso, J., "Methods and apparatus for detecting hand-to-mouth compulsive habits," US Patent Application No. 15331840, October 22, 2016.

16. **Professional Registration:** None

17.   Projects

(Public installations or exhibitions – otherwise, my Media Lab research projects are listed at http://resenv.media.mit.edu/projects/ and detailed in my publications).

1) Invited exhibition and musical installation, MIT Museum, Cambridge MA, *The Paradiso Synthesizer,* January 12 – April 10, 2012. (see http://synth.media.mit.edu)

2) Invited installation, Ars Electronica Festival 2011, *DoppelLab and Digital Excavation,* August 31 - September 6, 2011. (see http://doppellab.media.mit.edu)

3) Invited installation at Ars Electronica 2009 (with students Alex Reben, Matt Laibowitz, Nan-Wei Gong), *Ubiquitous Sensor Network Navigator,* September 3-8, 2009. (see http://www.aec.at/humannature/mit-medialab/ubiquitous-sensor-network-navigator)

4) Invited exhibition and performance of my homemade modular music synthesizer at the 25'th anniversary Ars Electronica Festival, *Timeshift,* Linz, Austria, September 3-7, 2004; also presented an invited artists' seminar on history and design of modular synthesizers. (see http://web.media.mit.edu/~joep/synthars.html)

5) Invited installation of the *Interactive Window* impact tracker at the Innovation Corner, Motorola iDEN facility, Plantation, Florida, October 30, 2003 – 2006. (see http://resenv.media.mit.edu/Tapper/Motorola.html)

6) Exhibition at the Artbots Robotic Talent Show in New York City: *Tribblation* (a sphere tiled by a reactive sensor net skin), with student Josh Lifton, July 12-13, 2003. (see http://resenv.media.mit.edu/tribble/)

7) Exhibition of the *Magic Carpet* installation at the MIT Museum as *Stomping Ground,* February 28, 2002 – April 5, 2004. (see http://web.media.mit.edu/~joep/SpectrumWeb/captions/Carpet.html)

8) Installation of interactive window in collaboration with American Greetings at their flagship card store at Rockefeller Center in New York City, Dec. 9, 2001- Feb. 18, 2002. (see http://resenv.media.mit.edu/Tapper/AmGreet.html)

9) Exhibition of window tap-tracking interface at the Kitchen Gallery in New York City in *Telephone Story* as part of the *ID/Entity Exhibition,* Nov. 30, 2001- Jan. 15, 2002. (see http://resenv.media.mit.edu/Tapper/IdEntity.html)

10) Invited exhibition of *Interactive Window* System at the Ars Electronica Center, Linz Austria, September 1, 2001 - September 1, 2004. (see http://resenv.media.mit.edu/Tapper/ResWindow.html)

11) Invited installation, *Atmospheres,* (in collaboration with Prof. John Maeda) at the *Workspheres* Exhibition, Museum of Modern Art (MOMA), New York, February 7 through April 22, 2001. (see http://resenv.media.mit.edu/atmo/index.html)

12) Invited installation of *Magic Carpet* musical installation at the Current Science and Technology Center, Boston Museum of Science, February 1 through April 20, 2001. (see http://web.media.mit.edu/~joep/SpectrumWeb/captions/Carpet.html)

13) Invited installation of *Musical Trinkets* at the SMAU Convention, Milan Italy, October 19-23, 2000. (see http://resenv.media.mit.edu/sweptRF.html).

18. Symposia Organized:

(External academic workshops or conferences – in addition, I have organized several themed symposia with invited speakers for Media Lab consortia meetings, which I am omitting here)

Local Chair, IEEE International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2015), Cambridge MA, June 9-12, 2015.

Local Chair, IEEE International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2013), Cambridge MA, May 6-9, 2013.

Co-chair, ISWC 2007 (International Symposium on Wearable Computing), Boston MA, Oct. 11-13, 2007.

Technical Program Committee Co-Chair, The Fourth Workshop on Embedded Networked Sensors (EmNets 2007), Cork Ireland, June 25-26, 2007

Chair, Sensor Platform Tools and Design Methods for Networked Embedded Systems (SPOTS), 5'th International IEEE Conference on Information Processing in Sensor Networks (IPSN06), Nashville TN, April 19-21, 2006.

Co-Chair, IEEE International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2006), Cambridge MA, April 3-5, 2006.

Chief Organizer, First International Conference on New Interfaces for Musical Expression (NIME 2002), Dublin Ireland, May 24-26, 2002.

19. Teaching Experience of Joseph A. Paradiso:

Term	Sub. No.	Title	Role	Enrollment
		As Course founder/lecturer or co-founder/co-lecturer:		
FT16	MAS.S68	Here, There and Everywhere: The Future of Music in Sound, Space, and Place	Co-Instructor	20
FT15	MAS.500	Hands on Foundations in Media Technology	Chief Instructor	20
ST16	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
FT15	MAS.837	Principles of Electronic Music Interfaces	Instructor	10
FT15	MAS.500	Hands on Foundations in Media Technology	Chief Instructor	20
ST15	MAS.836	Sensor Technologies for Interactive Environments	Instructor	15
FT14	MAS.S62	New Paradigms in Musical Instruments	Co-Instructor	10
FT14	MAS.500	Hands on Foundations in Media Technology	Chief Instructor	20
ST14	MAS.S63	Silicon Menagerie: From Bioinspiration to Biomemetics	Co-Instructor	13
ST14	MAS.500	Hands on Foundations in Media Technology	Chief Instructor	20
FT13	4.523	Second Nature: Design of Low-Power Environmental Sensors & Networks	Co-Instructor	10
FT13	MAS.500	Hands on Foundations in Media Technology	Chief Instructor	20
ST13	MAS.826	Future of Festivals	Co-Instructor	15
FT12	MAS.837	Principles of Electronic Music Interfaces	Instructor	10
ST12	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
FT11	MAS.S61	Emerging Technologies in Location-Aware Computing	Instructor	10
ST11	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
FT10	MAS.837	Principles of Electronic Music Interfaces	Instructor	10

ST10	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
ST09	MAS.969	Building Cross-Reality Applications	Instructor	7
FT08	MAS.837	Principles of Electronic Music Interfaces	Instructor	10
ST08	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
ST07	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
FT06	MAS.960	Principles of Electronic Music Controllers	Instructor	10
ST06	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
FT05	MAS.961	Developing Applications for Sensor Networks	Instructor	12
ST05	MAS.836	Sensor Technologies for Interactive Environments	Instructor	20
FT04	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
ST04	MAS.836	Sensor Technologies for Interactive Environments	Instructor	16
FT03	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
ST03	MAS.965	Electronic Skins and Dense Sensor Networks	Instructor	15
FT02	MAS.963	Principles of Electronic Music Controllers	Instructor	10
FT02	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
FT01	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
ST01	MAS.967	Sensor Technologies for Interactive Environments	Instructor	17
FT00	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
FT99	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
FT98	MAS.863	How to Make (Almost) Anything	Co-Instructor	16
ST83	VP (ETHZ)	Praktikum für Vorgerückte (Junior Physics Lab)	Instructor	10

As Guest Lecturer:

ST14	4.373	Sound installations + sonic interventions	Project Jury	10
ST13	15.356	How to Develop Breakthrough Products and Services	Guest Lecturer	30
ST12	15.356	How to Develop Breakthrough	Guest Lecturer	30

		Products and Services		
ST12	4.333	(in)dependent people: advanced seminar in networked cultures and participatory media	Guest Lecturer	10
ST11	15.356	How to Develop Breakthrough Products and Services	Guest Lecturer	30
FT11	MPATE-GE-2038	Creating with Interactive Media: Buchla to Ableton (NYU)	Guest Lecturer	15
FT11	MAS.825J	ARTS@MEDIA LAB	Guest Lecturer	20
ST10	15.356	How to Develop Breakthrough Products and Services	Guest Lecturer	30
ST09	15.356	How to Develop Breakthrough Products and Services	Guest Lecturer	30
ST08	15.356	How to Develop Breakthrough Products and Services	Guest Lecturer	30
ST08	CSIM	5 guest lectures on 'Advanced Interface Design' at the Universitat Pompeu Fabra (UPF) in Barcelona	Guest Lecturer	29
FT07	MAS.825J	Musical Aesthetics and Media Technology	Guest Lecturer	15
ST06	15.356	Development of Concepts for Very Novel Products and Services	Guest Lecturer	30
ST06	MAS.960	Digital Innovations	Guest Lecturer	25
ST06	CMS.876	History of Media and Technology	Guest Lecturer	15
ST05	15.356	Development of Concepts for Very Novel Products and Services	Guest Lecturer	30
ST05	591b	Active Materials (Yale Architecture Dept.)	Guest Lecturer	10
FT04	MAS.965	Deep Engagement	Guest Lecturer	10
ST04	6.ThT	Preparation for Masters of Engineering Thesis	Guest Lecturer	15
ST04	MAS.968	Concept Car	Guest Lecturer	7
ST04	MAS.963	Ambient Intelligence	Guest Lecturer	15
ST04	15.356	Development of Concepts for Very Novel Products and Services	Guest Lecturer	30
FT03	1.961	Sensor Based Monitoring of Physical Infrastructure and the Environment	Guest Lecturer	10
ST03	15.356	Development of Concepts for Very Novel Products and Services	Guest Lecturer	30
FT02	6.191	Prototyping Research Results	Guest Lecturer	15
ST02	15.356	Development of Concepts for Very	Guest Lecturer	30

		Novel Products and Services		
FT01	6.191	Prototyping Research Results	Guest Lecturer	10
ST01	Music 250A	Human Computer Interaction Theory and Practice: Designing New Devices (Stanford University)	Guest Lecturer	20
ST01	15.356	Development of Concepts for Very Novel Products and Services	Guest Lecturer	30
ST01	4.259J	Urban Narratives: Making the City Speak	Guest Lecturer	15
ST00	15.356	Development of Concepts for Very Novel Products and Services	Guest Lecturer	30
ST00	MS-335	Advanced Modular Synthesis (Berklee School of Music)	Guest Lecturer	10
FT99	6.191	Prototyping Research Results	Guest Lecturer	10
ST98	SEM.DL2	Scientific & Engineering Problems...	Guest Lecturer	10
FT97	MAS.962	Interacting w. Synthetic Characters	Guest Lecturer	20
FT97	MAS.846	Workshop in Elastic Movie Time	Guest Lecturer	20
FT97	MAS.825J	Musical Aesthetics & Media Tech.	Guest Lecturer	20
ST97	SEM.DL2	Scientific & Engineering Problems...	Guest Lecturer	10
ST96	SEM.DL2	Scientific & Engineering Problems...	Guest Lecturer	10
ST95	SEM.DL2	Scientific & Engineering Problems...	Guest Lecturer	10
ST94	SEM.DL2	Scientific & Engineering Problems...	Guest Lecturer	10
ST92	SEM.DL2	Scientific & Engineering Problems...	Guest Lecturer	10

Note – Enrollment numbers are estimated from memory, generally accurate to within 20%

20. Publications of Joseph A. Paradiso:

a. **Books:** None yet completed.

b. **Papers in Refereed Journals:**

1) Gillian, N. and Paradiso, J.A., "The Gesture Recognition Toolkit," *Journal of Machine Learning Research*, Vol. 15, October 2014, pp. 3483-3487.

2) *Zoran, A., Shilkrot, R., Goyal, P., Maes, P., Paradiso, J.A., "The Wise Chisel: The Rise of the Smart Handheld Tool," *IEEE Pervasive Computing*, 13(3), July-Sept. 2014, pp.48-57.

3) Ray, S.D, Gong, N.-W., Glicksman, L.R., Paradiso, J.A., "Experimental characterization of full-scale naturally ventilated atrium and validation of CFD simulations," *Energy and Buildings*, Volume 69, February 2014, pp. 285–291.

4) *Zoran, A., Shilkrot, R., Nanyakkara, S., Paradiso, J., "The Hybrid Artisans: A Case Study in Smart Tools," *ACM Trans. Comput.-Hum. Interact. (ToCHI)*, Vol. 21, No. 3, Article 15 (June 2014), 29 pages.

5) *Mittal, M., and Paradiso, J.A., "Ubicorder: A Mobile Device for Situated Interactions with Sensor Networks," *IEEE Sensors Journal*, Vol. 11, No. 3, March 2011, pp. 818-828.

6) *Zoran, A. and Paradiso, J.A. "The Chameleon Guitar-Guitar with a Replaceable Resonator," in *Journal of New Music Research*, 40.1 (2011), pp. 59–74.

7) Paradiso, J.A., Gips, J., Laibowitz, M., Sadi, S., Merrill, D., Aylward, R., Maes, P., and Pentland, A., "Identifying and Facilitating Social Interaction with a Wearable Wireless Sensor Network," in the *Springer Journal of Personal & Ubiquitous Computing*, Volume 14, Number 2, February 2010, pp 137-152.

8) *Lifton, J., Laibowitz, M., Harry, D., Gong, N.W., Mittal, M. and Paradiso, J.A., "Metaphor and Manifestation – Cross Reality with Ubiquitous Sensor/Actuator Networks," *IEEE Pervasive Computing Magazine*, July-September 2009 (vol. 8 no. 3), pp. 24-33

9) *Bamberg, S.J.M., Benbasat A.Y., Scarborough D.M., Krebs D.E., Paradiso J.A., "Gait analysis using a shoe-integrated wireless sensor system," IEEE Transactions on Information Technology in Biomedicine, Vol. 12, No. 4, July 2008, pp. 413-423. **Winner of the IEEE (EMB) Transactions on Information Technology in Biomedicine 2012 Outstanding Paper Award**.

10) *Feldmeier, M. and Paradiso, J.A., "An Interactive Music Environment for Large Groups with Giveaway Wireless Motion Sensors," to appear in *Computer Music Journal*, Vol. 31, No. 1 (Spring 2007), pp. 50-67.

11) *Broxton, M., Lifton, J., and Paradiso, J.A., "Localization on the Pushpin Computing Sensor Network Using Spectral Graph Drawing and Mesh Relaxation," *ACM Mobile Computing and Communications Review*, Vol. 10, No. 1, January 2006, pp. 1-12.

* Outgrowth of supervised thesis

12) *Paradiso, J.A., and Leo, C-K, "Tracking and Characterizing Knocks Atop Large Interactive Displays," *Sensor Review*, 25:2, (invited paper in special issue on vibration and impact sensing), Vol. 25, No. 2, 2005, pp. 134-143.

13) Paradiso, J.A. and Starner, T., "Energy Scavenging for Mobile and Wireless Electronics," *IEEE Pervasive Computing*, Vol. 4, No. 1, February 2005, pp. 18-27.

14) Paradiso, J.A., Lifton. J., and Broxton, M., "Sensate Media - Multimodal Electronic Skins as Dense Sensor Networks," *BT Technology Journal*, 22(4), October 2004, pp. 32-44.

15) Paradiso, J.A., O'Modhrain S., "Current Trends in Electronic Music Interfaces," *Journal of New Music Research*, Vol. 32, No. 4, December 2003, pp. 345-349.

16) *Paradiso, J.A., Pardue, L.S., Hsiao, K, Benbasat, A.Y., "Electromagnetic Tagging for Electronic Music Interfaces," *Journal of New Music Research*, Vol. 32, No. 4, December 2003, pp. 395-409.

17) Paradiso, J.A. "Tracking Contact and Free Gesture Across Large Interactive Surfaces," *Communications of the ACM*, Vol. 46, No. 7, July 2003, pp. 62-68.

18) *Shenck, N.S., Paradiso, J.A., "Energy Scavenging with Shoe-Mounted Piezoelectrics," *IEEE Micro*, Vol. 21, No. 3, May-June 2001, pp. 30-42.

19) Paradiso, J.A., Hsiao, K., Strickon, J., Lifton, J. and Adler, A., "Sensor Systems for Interactive Surfaces," *IBM Systems Journal*, Vol. 39, No. 3&4, October 2000, pp. 892-914.

20) Paradiso, J.A., Hsiao, K., Benbasat, A. and Teegarden, Z., "Design and Implementation of Expressive Footwear," *IBM Systems Journal,* Vol. 39, No. 3&4, October 2000, pp. 511-529.

21) Paradiso, J.A. "The Brain Opera Technology: New Instruments and Gestural Sensors for Musical Interaction and Performance," *Journal of New Music Research*, 28(2), 1999, pp. 130-149.

22) Smith, J., White, T., Dodge, C., Allport, D., Paradiso, J. and Gershenfeld, N., "Electric Field Sensing for Graphical Interfaces," *IEEE Computer Graphics and Applications*, Vol. 18, N. 3, May-June 1998, pp. 54-60.

23) Paradiso, J.A., "Electronic Music Interfaces: New Ways to Play," *IEEE Spectrum* (cover article), Vol. 34, No. 12, December 1997, pp. 18-30.

24) Paradiso, J.A., Gershenfeld, N., "Musical Applications of Electric Field Sensing," *Computer Music Journal,* Vol. 21, No. 3, Summer 1997, pp. 69-89.

25) Paradiso, J.A., "New Technologies for Monitoring the Precision Alignment of Large Detector Systems," *Nuclear Instruments and Methods in Physics Research* A386, 1997, pp. 409-420.

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26) Paradiso, J.A., "The Interactive Balloon: Sensing, Actuation, and Behavior in a Common Object," *IBM Systems Journal*, Vol. 35, Nos. 3&4, 1996, pp. 473-487.

27) Korytov, A., Osborne, L., Paradiso, J., Rosenson, L., Taylor, F., "Multi-Point Wide-Range Precision Alignment Technique for the GEM Detector," *Nuclear Instruments and Methods in Physics Research*, A343, 1994, pp. 428-434.

28) Aziz, T., *et al.*, "A Precision Experiment On Electrons, Photons and Muons at LHC," *Nuclear Instruments and Methods in Physics Research*, A325, 1994, pp. 23-91.

29) Paradiso, J.A., "Global Steering of Single Gimballed Control Moment Gyroscopes using a Directed Search," *Journal of Guidance, Control and Dynamics*, Vol. 15, No. 5, September-October 1992, pp. 1236-1244.

30) Paradiso, J.A., "Adaptable Method of Managing Jets and Aerosurfaces for Aerospace Vehicle Control," *Journal of Guidance, Control and Dynamics*, Vol. 14, No. 1, January-February 1991, pp. 44-50.

31) *Dzielski, J., Bergmann, E., Paradiso, J., Rowell, D., Wormley, D., "An Approach to CMG Steering Using Feedback Linearization," *Journal of Guidance, Control and Dynamics,* Vol. 14, No. 1, January-February 1991, pp. 96-106.

32) *Bedrossian, N., Paradiso, J., Bergmann, E., Rowell, D., "Steering Law Designs for Redundant SGCMG Systems," *Journal of Guidance, Control and Dynamics*, Vol. 13, No. 6, November-December 1990, pp. 1083-1089.

33) *Bedrossian, N., Paradiso, J., Bergmann, J., Rowell, D., "Redundant Single Gimbal Control Moment Gyroscope Singularity Analysis," *Journal of Guidance, Control and Dynamics*, Vol. 13, No. 6, November-December, 1990, pp. 1096-1090.

34) Antreasyan, D., *et al.*, "Associated multiplicities in mu -pair events at the ISR," *Nuovo Cimento A*, Vol.99A, Ser.2, No.5, May 1988, pp. 595-617.

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36) Becker, U. and Paradiso, J.A., "An Optical CCD-based System for Precise Drift Chamber Positioning," *Nuclear Instruments and Methods,* 196, 1982, pp. 381-386.

37) Ambrosio, M., *et al.*, "Measurements of Elastic Scattering in Alpha-Alpha and Alpha-Proton Collisions at the CERN Intersecting Storage Rings," *Physics Letters* 113B, 1982, pp. 347-352.

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39) Antreasyan, D., *et al.*, "Dimuon Scaling Comparison at 44 and 62 GeV," *Physical Review Letters* 48, 1982, pp. 302-304.

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43) Barber, D.P. *et al.*, "Test of Universality of Charged Leptons," *Physical Review Letters,* 43, 1979, pp. 1915-1918.

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45) Barber, D.P., *et al.*, "Discovery of 3-Jet Events and a Test of Quantum Chromodynamics at PETRA," *Physical Review Letters,* 43, 1979, pp. 830-833.

46) Barber, D., *et al.*, "Test of Quantum Electrodynamics at $\sqrt{s}$ = 13 and 17 GeV," *Physical Review Letters,* 42, 1979, p. 1113-1117.

47) Barber, D., *et al.*, "Measurement of the Relative Total Hadronic Cross-Section R at PETRA," *Physical Review Letters,* 42, 1979, pp. 1110-1113.

* Outgrowth of supervised thesis

c.   **Papers in Refereed Conference Proceedings:**

1) *Dementyev, A., Kao, H-L, Choi, I., Ajilo, D., Xu, M., Paradiso, J.A., Schmandt, C., and Follmer, S., 'Rovables: Miniature On-Body Robots as Mobile Wearables,' in Proc. of ACM UIST 2016, Tokyo, October 16-19, 2016, pp. 111-120. **Best Paper Award**

2) Nakagaki, K., Dementyev, A., Follmer, S., Paradiso, J., and Ishii, H., 'ChainFORM: A Linear Integrated Modular Hardware System for Shape Changing Interfaces,' in Proc. of ACM UIST 2016, October 16-19, 2016.

3) Liu, X., Vega, K., Qian, J., Paradiso, J., and Maes, P., "Fluxa: Body Movements as a Social Display," in Adj. Proc. of UIST 2016, October 16-19, 2016, pp. 155-157.

4) Paradiso, J. et al, "(UnderWare) Aesthetic, Expressive, and Functional On-Skin Technologies," in Ubicomp/ISWC 2016 Adjunct Proceedings, Heidelberg Germany, Sept. 12-16, 2016.

5) Orner, B.A., Reilly, D.E., Chase, A., Deokar, V., Linder, S.P., Goyal, P., Paradiso, J.A., and Zuckerman, E., "Sambaza Watts: a nano-grid for accessing and sharing energy," in the Proc. of the CIRED Workshop, Helsinki Finland, June 14-15, 2016, Paper 0348.

6) *Cherston, J., Hill, E., Goldfarb, S. and Paradiso, J., "Musician and Mega-Machine: Compositions Driven by Real-Time Particle Collision Data from the ATLAS Detector," in Proc. of the NIME 2016 Conference, Brisbane Australia, July 11-15, 2016.

7) *Lynch, E. and Paradiso, J.A., "SensorChimes: Musical Mapping for Sensor Networks," in Proc. of the NIME 2016 Conference, Brisbane Australia, July 11-15, 2016.

8) Xiao, X, Haddad, D.D., Sanchez, T., van Troyer, A., Kleinberger, R., Webb, P. Paradiso, J., Machover, T., and Ishii, H., "Kinéphone: Exploring the Musical Potential of an Actuated Pin-Based Shape Display," Proc. of the NIME 2016 Conference, Brisbane Australia, July 11-15, 2016.

9) Kao, H-L, Mohan, M., Vega, K., Schmandt, C., and Paradiso, J.A., 'ChromoSkin: Towards Interactive Cosmetics Using Thermochromic Pigments,' in Proc. of *CHI 2016*, May 2016, pp. 3703-3706.

10) *Cherston, J., Hill, E., Goldfarb, S., and Paradiso, J.A., "Sonification Platform for Interaction with Real-Time Particle Collision Data from the ATLAS Detector," in Proc. of *CHI 2016*, May 2016, pp. 1647-1653.

11) Liu, X., Vega, K., Maes, P., and Paradiso, J.A., 'Wearability Factors for Skin Interfaces,' in Proc. of the *ACM Augmented Human Conference*, Geneva Switzerland, February 2016. **Best Paper Award (second prize).**

* Outgrowth of supervised thesis

12) *Russell, S., Dublon, G., and Paradiso, J.A., 'HearThere: Networked Sensory Prosthetics Through Auditory Augmented Reality,' to be presented at the *ACM Augmented Human Conference*, Geneva Switzerland, February 2016.

13) Azaria, A., Mayton, B., and Paradiso, J.A., "Thumbs-Up: Wearable Sensing Device for Detecting Hand-to-Mouth Compulsive Habits," to be presented at the *9'th International Conference on Biomedical Electronics and Devices (BIODEVICES 2016)*, Rome Italy, February 2016.

14) *Zhao, N., Aldrich, M., Reinhart, C.F., and Paradiso, J.A., "A multidimensional continuous contextual lighting control system using Google Glass," in Proc. of the *2nd ACM International Conference on Embedded Systems For Energy-Efficient Built Environments (BuildSys 2015),* Nov. 2015. **Best Presentation Award**

15) *Dementyev, A., Kao, H-L, and Paradiso, J.A., "SensorTape: Modular and Programable 3D-Aware Dense Sensor Network on a Tape," in Proc. of *ACM UIST* (*User interface software and technology)* November, 2015.

16) Benavides, X., Zhu, Chang Long, Maes, P., Paradiso, Joseph A., "KickSoul: A Wearable System for Feet Interactions with Digital Devices," in Proc. of *ACM UIST* (*User interface software and technology)* November, 2015.

17) Zhao, N. and Paradiso, J.A., "HALO: wearable lighting," in Adjunct Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing and Proceedings of the 2015 ACM International Symposium on Wearable Computers, pp. 601-606, Sept. 7-11, 2015. **ISWC Design Exhibition Best Aesthetics Award**

18) Amores, J., Maes, P., and Paradiso, J., "Bin-ary: Detecting the State of Organic Trash to Prevent Insalubrity," Ubicomp 2015 (ACM International Joint Conference on Pervasive and Ubiquitous Computing), Sept. 7-11, 2015.

19) Zhao, N., Dublon, G., Gillian, N., Dementyev, A., Paradiso, J., "EMI Spy: Harnessing Electromagnetic Interference for Low-Cost, Rapid Prototyping of Proxemic Interaction," presented at the *2015 International Conference on Wearable and Implantable Body Sensor Networks (BSN '15)*, June 2015.

20) Haddad, D.D., Tome, B., Machover, T., and Paradiso, J.A., "MMODM: Massively Multipler Online Drum Machine," presented at *International Conference on New Interfaces for Musical Expression (NIME '15)*, Baton-Rouge, LA, 2015.

21) Ramsay, D.B., and Paradiso, J.A., "GroupLoop: A Collaborative, Network-Enabled Audio Feedback Instrument," presented at *International Conference on New Interfaces for Musical Expression (NIME '15)*, Baton-Rouge, LA, 2015.

22) Kleinberger, R., Dublon, G., Paradiso, J.A., and Machover, T., "PHOX Ears: A Parabolic, Head-mounted, Orientable, eXtrasensory Listening Device presented at *International Conference on New Interfaces for Musical Expression (NIME '15)*, Baton-Rouge, LA, 2015.

* Outgrowth of supervised thesis

23) Kao, H-L., Dementyev, A., Paradiso, J.A., and Schmandt, C., "NailO: Fingernails as Input Surfaces," to appear in the Proceedings of *the International Conference on Human Factors in Computing Systems (CHI'15)*, Seoul Korea, April 2015. **Honorable Mention for Best Paper**

24) *Russell, S. and Paradiso, J.A., "Hypermedia APIs for sensor data: A pragmatic approach to the Web of Things," in the *Proceedings of ACM Mobiquitous 2014*, London UK, December 2014, pp. 30-39.

25) *Dementyev, A. and Paradiso, J., "WristFlex: Low-Power Gesture Input with Wrist-Worn Pressure Sensors," in the *Proceedings of UIST 2014, the 27th annual ACM symposium on User interface software and technology*, Honolulu Hawaii, October 2014, pp. 161-166.

26) *Goyal, P., Maes, P., Paradiso, J., "Nishanchi: CAD for hand-fabrication," in the *Adjunct Proceedings of UIST 2014, the 27th annual ACM symposium on User interface software and technology*, Honolulu Hawaii, October 2014, pp. 63-64.

27) Gillian, N., Pfenninger, S., Russell, S., and Paradiso. J.A., "Gestures Everywhere: A Multimodal Sensor Fusion and Analysis Framework for Pervasive Displays," In *Proceedings of The International Symposium on Pervasive Displays (PerDis '14)*, Sven Gehring (Ed.). ACM, New York, NY, June 2014, pp. 98-103.

28) *Way, D. and Paradiso, J., "A Usability User Study Concerning Free-Hand Microgesture and Wrist-Worn Sensors," In *Proceedings of the 2014 11th International Conference on Wearable and Implantable Body Sensor Networks (BSN '14)*. IEEE Computer Society, June 2104, pp. 138-142.

29) Dublon, G, Paradiso, J. A., "FingerSynth: Wearable Transducers for Exploring the Environment and Playing Music Everywhere," in *International Conference on New Interfaces for Musical Expression (NIME '14)*, London, U.K., 2014, pp. 134-135.

30) *Dublon, G., Portocarrerro, E., Bove, V.M., Paradiso, J.A., "ListenTree: Audio Haptic Display in the Natural Environment," in *Proc. of the International Community for Auditory Display (ICAD '14)*, New York, NY, 2014, 2 pages.

31) *Gong, N.-W., Steimle, J., Olberding, S., Hodges, S., Gillian, N., Kawahara, Y., and Paradiso, J., "PrintSense: A Versatile Sensing Technique to Support Multimodal Flexible Surface Interaction" In *Proceedings of the International Conference on Human Factors in Computing Systems (CHI'14)*, Toronto Canada, April 2014, pp. 1407-1410.

32) *Aldrich, M., Badshah, A., Mayton, B., Paradiso, J.A., "Random Walk and Lighting Control," in *Proceedings of the 2013 IEEE Sensors Conference*, Baltimore, MD, November 2013, 4 pages.

33) *Zoran, A., Shilkrot, R., Paradiso, J.A. "Human-computer interaction for hybrid carving," in *Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST 2013)*, October 2013, pp. 433-440.

* Outgrowth of supervised thesis

34) Olberding, S., Gong, N.-W., Tiab, J., Paradiso, J. A., Steimle, J., "A Cuttable Multi-touch Sensor," in *Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST 2013)*, October 2013, pp. 245-254.

35) *Goyal, P., Agrawal, H., Paradiso, J,A., and Maes, P., "BoardLab: PCB as an interface to EDA software," In *Proceedings of the adjunct publication of the 26th annual ACM symposium on User interface software and technology (UIST '13 Adjunct),* October 2013, pp. 19-20.

36) *Gong, N.-W., Zoran, A., Paradiso, J.A., "Inkjet-printed Conductive Patterns for Physical Manipulation of Audio Signals," in the *Adjunct Proceedings of the 26th annual ACM symposium on User interface software and technology (UIST 2013)*, pp. 13-14.

37) *Mayton, Brian D., Zhao, N., Aldrich, M., Gillian, N., Paradiso, Joseph A., "WristQue: A personal sensor wristband," in *Proc. of the IEEE International Conference on Wearable and Implantable Body Sensor Networks (BSN '13)*, pp.1-6, 2013. **Best Session Paper**

38) *Zoran, A. and Paradiso, J.A., "FreeD – A Freehand Digital Sculpting Tool", in The 31st International Conference on Human Factors in Computing Systems (CHI '13). ACM, Paris, France, April/May 2013, pp. 2613-2616. **Best Paper Award**

39) *Gong, N.-W., Zhao, N., Paradiso, J.A., "Conductive inkjet printed DIY music control surface," in *CHI '13 Extended Abstracts on Human Factors in Computing Systems (CHI EA '13)*. ACM, April/May 2013, pp. 2895-2896.

40) *Joliat, N., Mayton, B., Paradiso, J.A., "Spatialized Anonymous Audio for Browsing Sensor Networks Via Virtual Worlds," in *The19th International Conference on Auditory Display (ICAD)*, Lodz, Poland, July 2013, pp. 67-75.

41) *Gong, N-W., Wang, C-Y., and Paradiso, J.A., "Low-cost Sensor Tape for Environmental Sensing Based on Roll-to-roll Manufacturing Process," in *IEEE SENSORS 2012*, Taipei, October 2012, 4 pages.

42) *Gong, N.-W., Ware, L., Ray, S., Ware, G., Leida, B., Ren, T., London, P., Turza, A., Way, D., Glicksman, L., Paradiso J.A., "Dense, Low-Power Sensor Network for Three-Dimensional Thermal Characterization of Large-Scale Atria Spaces," in *IEEE SENSORS 2012*, Taipei, October 2012, 4 pages.

43) *Mayton, B., Dublon, G., Palacios, S., and Paradiso, J.A., "TRUSS: Tracking Risk with Ubiquitous Smart Sensing," in *IEEE SENSORS 2012*, Taipei, October 2012, 4 pages.

44) *Gong, N-W, Zhao, N., and Paradiso, J.A., "A Customizable Sensate Surface for Music Control," in *Proceedings of NIME 2012*, Ann Arbor, Michigan, May 2012, pp. 417-420.

45) Gillian, N. and Paradiso, J.A., "Digito: A Fine-Grain Gesturally Controlled Virtual Musical Instrument," in *Proceedings of NIME 2012*, Ann Arbor, Michigan, May 2012, pp. 39-42.

* Outgrowth of supervised thesis

46) Mayton, B., Dublon, G., Joliat, N. and Paradiso, J.A., "Patchwork: Multi-User Network Control of a Massive Modular Synthesizer," in *Proceedings of NIME 2012*, Ann Arbor, Michigan, May 2012, pp. 453-456.

47) Dublon, G. and Paradiso, J.A., "Tongueduino: hackable, high-bandwidth sensory augmentation," In *CHI '12 Extended Abstracts on Human Factors in Computing Systems (CHI EA '12)*. ACM, May 2102, pp. 1453-1454.

48) *Zoran, A. and Paradiso, J.A., The FreeD-A Handheld Digital Milling Device for Craft and Fabrication, in *Adjunct proceedings of the 25th annual ACM symposium on User interface software and technology (UIST Adjunct Proceedings '12)*, Oct 7-10, 2012, pp. 3-4.

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24) Paradiso, J.A., "Energy Harvesting for Mobile Computing," in the Proc. of *Power To Go*, Fraunhofer Symposium Mikroenergietechnik, October 10, 2006 in Berlin, Germany, Fraunhofer Gesellschaft, pp. 72-101.

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39) Paradiso, J.A., "Dual-Use Technologies for Electronic Music Controllers: A Personal Perspective," in *Proc. of the Second International Conf. on New Interfaces for Musical Expression* (NIME-03), May 22-24, 2003 (invited keynote address), Montreal, Canada, pp. 228-234.

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"Chamber Alignment at the TTR" in Muon Group Meeting – SSCL (GEM TN-92-102, April 29, 1992),

"Extended Range Alignment at Draper" in GEM Muon Group Meeting – Duncanille, TX, (GEM TN-93-287, February 3, 1993)

"GEM Muon Alignment and Suggestions," in GEM Muon Engineering Status Meeting – SSCL, (GEM TN93-397, April 15, 1993)

"Alignment" in GEM Muon Review Meeting – SSCL, (GEM TN-93381, March 16, 1993)

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"*Alignment Analysis*," in GEM SSCL/Muon Meeting – San Diego, CA (GEM TN-93-415, May 11, 1993)

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86) Fehlmann, J., Paradiso, J., Viertel, G., "New Results on TEC Development," L3 Collaboration Technical Note 88, April 1982.

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89) Paradiso, J.A., "Mechanical Accuracy Of Large Frames Achieved By Computer Feedback," in Proc. of the 1981 Isabelle Summer Workshop, Volume 4, Brookhaven National Laboratory, BNL 51443, July 30-31, 1981, pp. 1283-1308.

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95) Paradiso, J., "Design and Test of a Simple Peak-Gated Sampler," Draper Intralab Memorandum ESC-93-310, November 23, 1993.

96) Paradiso, J., "Backgammon Electronics: Past, Present, & Future," Draper Intralab Memorandum EJC-91-1100, October 13, 1991.

97) Paradiso, J., "The Backgammon Timing/Gating Utility," Draper Intralab Memorandum EJC 91-1101, October 12, 1991.

98) Paradiso, J., "The Quadrature Sampler," Draper Intralab Memorandum EJC 91-1029, May 30, 1991.

99) Paradiso, J., "Electronics for Testing the Wideband Monopulse Sonar," Draper Intralab Memorandum EJB-91-029, March 20, 1991.

100) Paradiso, J., "Sonar Application of a Quadrature-Sampled Interpolation Beamformer," Draper Intralab Memorandum EJB 90-191, December 31, 1990.

101) Paradiso, J., "Methods of Smoothing CMG Gimbal Rates Calculated by Linear Programming," Draper Intralab Memorandum SpaceStation-87-20, November 20, 1987.

102) Paradiso, J., "Characteristics of Candidate Reaction Wheel Configurations for Satellite Attitude Control," Draper Intralab Memorandum NRL-87-1, October 1, 1987.

103) Paradiso, J., "Selection and Management of Magnetically Gimbaled CARES Gyroscopes via Linear Programming," Draper Intralab Memorandum SpaceStation-86-19, December 1, 1986.

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104)   Paradiso, J., "An Efficient OFS-Compatible Kinematic Model for Generalized CMGs," Draper Intralab Memorandum SpaceStation 85-9, March 25, 1985.

105)Paradiso, J., "Versatek Software," Draper Intralab Memorandum MX/S-005, August 1, 1977.

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106) Paradiso, J., Borque, L., Bramsen, P., Laibowitz, M., Ma, H., and Malinowski, M., "Sensing Systems for Glass Ceramic Cooktops," Internal MIT Media Lab Report, July 18, 2003 (38 p).

107) Paradiso, J., "Penn and Teller Séance Electronics," detailed description of the Media Lab's *Sensor Chair* design, Internal MIT Media Lab Report, December 1994 (68 p).

108) Paradiso, J., "Development of a τ Trigger," ETHZ and L3P Collaboration Final Report, October 30, 1992 (41 p).

109) Paradiso, J., "Oberheim 4-Voice MIDI Interface; Users Manual," Report for Lyle Mays, Inc, September 1991 (47 p).

110) Paradiso, J., "The Complete Technical Guide to WMFO," a tutorial on the design of a radio studio and associated electronics, March 1987 (283 p).

111) Paradiso, J., "Reaction Wheel Energy Storage," Draper Laboratory Internal Report, January 17, 1992 (50 p).

112) Paradiso, J., "A Brief Sketch of Proposed TEC Data Flow," ETH-Zurich Time-Expansion-Chamber (TEC) Group Technical Report, April 29, 1983 (6 p.).

113) Paradiso, J., "Description of TEC Analysis Utility Routines," ETH-Zurich Time-Expansion-Chamber (TEC) Group Technical Report, April 20, 1983 (16 p).

114) Paradiso, J., "The Design, Construction, and Operation of an Electronic Music Synthesizer," Tufts University Electrical Engineering Department Undergraduate Special Project Report (Winner of the 1977 Burden Engineering Prize), May 1977 (140 p).

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21.   Invited Lectures, Seminars, Performances, and Exhibitions:

1) Invited Panelist, *Future of Wireless Session*, IEEE Globecom 2016, Washington DC, December 7, 2017.

2) Invited Inspirational Lecturer, YouthConnect 2016, Expo 2020, Dubai UAE, 19 November 2016.

3) Keynote Lecture, Intel Software Professionals Conference, Hillsboro Oregon, *Beyond IoT – Ubiquitous Sensing and Human Experience,* October 19, 2016.

4) Invited Colloquium, Johannes Kepler University, Linz Austria, *Beyond IoT – Ubiquitous Sensing and Human Experience*, September 2016.

5) Invited Panelist and talk, Ars Electronica 2016, Linz Austria, 'Radical Atoms' Panel, *From Sensory Landscapes to Radical Subatoms*, September 9, 2016.

6) Keynote Lecture, IEEE PIMRC 2016, Valencia Spain, *Beyond IoT – Ubiquitous Sensing and Human Experience*, September 6, 2016.

7) Invited Colloquium, Bose Corporation, Framingham MA, *Beyond IoT – Ubiquitous Sensing and Human Experience*, August 27, 2016.

8) Invited talk in the 'Personalized Computing with Interconnected Wearables' session *Fun With Wearables*, at the *17th Annual Microsoft Research Summit*, Redmond WA, July 13-15, 2016.

9) Kickoff Lecture, MIT & Berklee School of Music's Open Music Initiative, *Some Musical Frontiers,* Cambridge MA, July 11, 2016.

10) Invited Lecture, Institut des Systèmes Complexes, Paris France, *Beyond IoT – Ubiquitous Sensing and Human Experience*, June 21, 2016.

11) Keynote Lecture, MIT World Real Estate Forum, *Beyond IoT – Ubiquitous Sensing and Human Experience*, May 19, 2016.

12) Invited talk at the *Environmental IoT: Taking Advantage of Chile's Natural Laboratories Conference*, Santiago, Chile, April 18-19, 2016.

13) Invited Talk at the ATLAS Outreach Session, CERN Geneva, *A Collaboration Between ATLAS and the MIT Media Lab to Build a Generalized Framework for Data-Driven Music,* February 23, 2016.

14) Video Lecture on sensing applications for the Internet of Things for the EDx Online Course Connected World: Technology Of The Internet Of Things (IoT), 2016.

15) Invited talk, Qualcomm Inc., *Beyond IoT - Ubiquitous Sensing and Human Experience*, San Diego CA, December 9, 2015.

16) Invited panelist, IEEE GlobeComm 2015, *Wearables: Our Experiences and Thoughts for the Future*, San Diego CA, December 8, 2015.

17) Distinguished Lecture Series, University of Michigan Computer Science and Engineering Dept., Ann Arbor MI, *Connecting with the Emerging Nervous System of Ubiquitous Sensing*, November 6, 2015.

18) Invited Panelist and talk, Chicago Ideas Week 2015, Chicago, IL, *Disruptive Innovation*, October 15, 2015.

19) Invited talk, Visualized 2015, *Redefining Presence Through Ubiquitous Sensing*, New York, NY, October 8-9, 2015.

20) Invited talk, Capital Magazine's Internet of Things Summit Meeting, Istanbul, Turkey, *Beyond IoT - Connecting with the Emerging Nervous System of Ubiquitous Sensing*, September 30, 2015.

21) Invited keynote, IoT Solutions World Congress (IoTS), Barcelona Spain, *Things That Think*, September 17, 2015.

22) Invited talk, KTH iPack Center Annual Meeting, Stockholm (Svartsjö), Sweden, *Beyond IoT – Ubiquitous Sensing and Human Experience*, August 28, 2015.

23) Invited talk, Huawei Strategy and Technology Workshop (STW), Shenzhen China, *Beyond 'Big Data' – Ubiquitous Sensing and how it will interact with people*, May 20, 2015

24) Invited talk, Toshiba Corporate R&D Center, Network System Laboratory, Kawasaki Japan, *At the Edges of 'Big Data'*, March 26, 2015.

25) Invited talk and panelist, Safecast Conference 2015, Tokyo Japan, *Art x Science – Connecting People to Environmental Sensing*, March 22, 2015.

26) Invited talk, Strategies in Light Conference, Las Vegas, NV, *New Interface Paradigms for Lighting Control*, February 26, 2015.

27) Invited keynote lecture, Guthman Musical Instrument Competition, Georgia Tech, Atlanta GA, 40 *Years of Music & Technology in 20 Minutes*, February 20, 2015.

28) Invited panelist at the 2015 Harvard National Collegiate Research Conference (NCRC), Environmental Engineering session, January 23, 2015.

29) Welcome address, MIT Media Lab India's Design Innovation Workshop, PDPU, Gandhinagar, India, January 17, 2015.

30) Invited talk, Smart Device Innovation Science Team, Intel Corporation, Santa Clara CA, *At the Edges of 'Big Data'*, November 10, 2011.

31) Invited panelist and talk, Re-Think Food Conference, Culinary Institute of the Arts, St. Helena CA, *The Virtualization of Food*, November 9, 2011.

32) Invited conference keynote, IEEE Dallas Circuits and Systems Conference 2014, University of Texas at Dallas, TX, *At the Edges of 'Big Data'*, October 13, 2014.

33) Invited panelist and talk, 2014 LVP (Longworth Venture Partners) Tech Gathering, Internet of Things Panel, Cambridge MA, October 6, 2014.

34) Invited talk, MIT Physics Dept. Faculty Lunch Seminar, MIT Cambridge MA, *At the edges of 'Big Data'*, September 25, 2014.

35) Invited talk and panelist, MIT-KIT (Kerberos and Internet Trust) Annual Conference, Cambridge MA, *At the Edges of 'Big Data',* September 18, 2014.

36) Invited video interview, panel discussion, and mini documentary about the future of networked sensors and our Tidmarsh Project, *John Roese – RealITy*, EMC Innovation Network, September 11, 2014, https://community.emc.com/docs/DOC-36727.

37) Invited Keynote Speaker, Annual Retreat for the Intel Science and Technology Center for Pervasive Computing (ISTC-PC) at U. Washington, Alderbrook Resort, WA, *At the Edges of 'Big Data',* August 12, 2014.

38) Faculty representative and conference panelist, Hackathon Natura Campus Media Lab, Natura Campus, Cajamar SP, Brazil, August 6, 2014.

39) Invited talk, MIT Media Lab @ Tokyo 2014, Tranomon Hills Forum, Tokyo Japan, *Where Big Data Touches People* July 10, 2014.

40) Invited corporate talks in Japan: NEC Research Lab, Kawasaki; TOPPAN, Koishikawa, Panasonic Headquarters, Osaka; Toshiba R&D Center, Kawasaki, *Where Big Data Touches People*, July 7-9, 2014.

41) Session host and speaker, Forum Academy Global Technology Outlook Online Lecture Series on Sensor Networks, World Economic Forum, July 2014: https://forumacademy.weforum.org/courses/ForumAcademy/PLM14101/Summer_2014/about

42) Invited talk and coordinator of the Sensors Track for the MIT Media Lab Boost Week In Kenya, iHub Nairobi, *Where Big Data Touches People*, May 26, 2014.

43) Invited panelist, Together Festival, 'I Dream of Wires Documentary Screening and Discussion,' ICA Boston, May 18, 2014.

44) Outreach lecture, Brooks Elementary School, Medford MA, *A Tour Through Space, as We Search for Extraterrestrial Life'*, April 30, 2014.

45) Invited session organizer and presenter, 'New Musical Frontiers @ the MIT Media Lab,' Moogfest 2014, Asheville North Carolina, *Musical Machines*, April 25, 2014.

46) Invited colloquium, TU Delft (Delft University of Technology), Department of Radiation Science & Technology, Delft, Netherlands, *Where Big Data Meets People,* April 17, 2014.

47) Invited panelist and talk, Machine Fantasies: A Workshop on Music Technologies–Past, Present, and Future ('Futures' Session), Tufts University, Medford MA, April 5, 2014.

48) Invited talk, 2014 EMC Technology Conference (D^2 - Disruptive Discovery), Cambridge MA, *Where Big Data Meets People*, April 3, 2014.

49) Invited keynote, Intel IPG Leadership Summit, Folsom CA, *Where Big Data Meets People*, March 5, 2014.

50) Invited talk and coordinator of the Sensors and Networks track for the Media Lab 2104 CREATE | ITERATE | INNOVATE Workshop, *Where Big Data Meets People*, Abu Dhabi, UAE, February 27, 2014.

51) Invited keynote, Design Innovation Workshop, WeSchool, Mumbai India, *Where Big Data Meets People*, February 1, 2014.

52) Invited colloquium, CEA Saclay Nano-INNOV, Paris France, *Where Big Data Meets People*, December 13, 2013.

53) Invited talk, Energy Harvesting & Storage USA, Santa Clara, CA, *Where Big Data Meets People*, November 21, 2013.

54) Invited panelist and talk, MIT Energy Initiative's 2013 Fall Research Conference, Cambridge MA, 'Potential Impacts of Big Data' Session, *Where Big Data Meets People*, October 3, 2013.

55) Invited lecture, 2013 International Symposium on Creative New-Media Performance, Shanghai Theatre Academy, Shanghai China, *Redefining Presence, Documentary, and Music – Media Transformation in the Age of Ubiquitous Computing*, September 29, 2013.

56) Invited keynote lecture, IEEE Custom Integrated Circuits Conference (CICC) 2013, San Jose CA, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, September 24, 2013.

57) Invited presentation, World Economic Forum Summer Davos, Dalian, China, IdeasLab: Rethinking Education with the Massachusetts Institute of Technology, *Learning in the Age of the Augmented Human*, Dalian China, September 11, 2013.

58) Invited talk, Annual Workshop of the iPack Center at KTH, Stockholm, Sweden, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, August 30, 2013.

59) Invited talk, 'Curious Minds' Lecture Series, Steelcase Inc., Grand Rapids, Michigan, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, July 30, 2013.

60) Invited lecture, HCC Summer School, IRCAM Paris, France, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, July 19, 2013,

61) Invited lecture, The MITRE Institute, Bedford MA, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, June 18, 2013.

62) Invited talk, Nokia Research Center (NRC), Sunnyvale CA, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, June 7, 2013.

63) Invited conference keynote, Sensors Expo, Chicago, IL, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, June 5, 2013.

64) Invited keynote speaker, EU HCC (Human-Computer Confluence) Visions Meeting, Barcelona Spain, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, May 17, 2013.

65) Invited talk, 2013 Future of Health Technology Summit, Cambridge MA, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, May 6, 2013.

66) Invited talk, 2013 MIT ICT Conference, Cambridge MA, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, April 25, 2013.

67) Interview filmed for Physics World, *Networked Environments of the Future*, April 11, 2013, http://physicsworld.com/cws/article/multimedia/2013/apr/11/networked-environments-of-the-future.

68) Invited colloquium, Qualcomm San Diego, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, April 2, 2013.

69) Invited lecture, Wilfrid Laurier University, EMTM Executive Breakfast Series, Waterloo Ontario, *Our Electronic Nervous System*, March 5, 2013.

70) Invited talk, Deloitte, Washington D.C., *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, January 29, 2013.

71) Invited talk, CERTI Laboratories, Florianópolis, Brazil, *Connecting Deeply Embedded Sensing to People*, November 20, 2012.

72) Invited talk, Embraer S.A., São José dos Campos, Brazil, *Connecting Deeply Embedded Sensing to People*, November 19, 2012.

73) Invited talk, Energy Harvesting & Storage and Wireless Sensor Networks & RTLS USA 2012 Conference, Washington D.C., *Leveraging Embedded Sensing for Energy Management*, November 8, 2012.

74) Keynote address, Annual TI Fellows Meeting, University of Texas, Dallas TX, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, October 18, 2012.

75) Invited panelist and talk, MITEI Annual Fall Energy Research Conference, Cambridge MA, "Advanced Building Technology" Session, *New Paradigms in Energy Management*, October 5, 2012.

76) Invited panelist, talk, and workshop participant, EPRI National Energy Efficiency Technology Summit, Portland OR, *New Paradigms in Lighting Control & Energy Management*, Sept. 25-26, 2012.

77) Invited panelist and talk, World Economic Forum Summer Davos, Dalian, China, 'Imagineering our Future' Session, September 13, 2012.

78) Invited presentation, World Economic Forum Summer Davos, Dalian, China, IdeasLab - Creating Smart Environments with the Massachusetts Institute of Technology, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, Dalian China, September 11, 2012.

79) Invited participant and talk, Interaction Beyond the Desktop, Schloss Dagstuhl Leibniz-Zentrum für Informatik Workshop, Wadern Germany, *Interaction Beyond The Desktop*, August 26-31, 2012.

80) Invited talk, Wearable Technologies (WT) Conference 2012, San Francisco, CA, *Wearable Systems as a Link to Ubiquitous Sensing and Actuation*, July 24, 2012.

81) Invited talk, Google Future of Mobile Workshop, Google Research, Mountain View, CA, *Wearables to Anchor User Experience In Smart Environments*, May 23, 2012.

82) Invited talk, Nokia's Lunch & Speaker Series, Nokia Labs, Cambridge MA, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, May 15, 2013.

83) Invited seminar, CREAT-ISS Summer School, McGill University, Montreal Canada, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, May 4, 2012.

84) Invited panelist and talk, "Future City - MITEI Forum #3 - Built Environment, Urban Systems, and Energy," Session on "Human Systems and Behavior," *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, Cambridge MA, April 30, 2012.

85) Invited talk and discussion, Together Festival 2012, MIT Museum, Cambridge MA, *Modular Synths, etc.,* April 7, 2012.

86) Invited keynote talk, Intel PCCG Tech Summit, Portland OR, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, April 12, 2012.

87) Invited keynote talk, Design Innovation Workshop, Apeejay Stya University, New Delhi, India, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, March 30, 2012.

88) Invited colloquium, Apeejay College Of Fine Arts, Jalandhar, India, *From Musical Controllers to...,* March 29, 2013.

89) Invited keynote talk, MIT Technology Review's EmTech India 2012, Bangalore, *Connecting with the Emerging Nervous System of Ubiquitous Sensing*, March 28, 2012.

90) Invited talk, SRC/NSF/SFI Forum on Integrated Sensors for Cybersystems (FISC-2030), Session on "Sensors for Physical World Interfaces: Application Landscape for Future Integrated Sensors," Carton House, Maynooth, Co. Kildare, Ireland, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, March 23, 2012.

91) Panelist and talk, MIT Council on the Arts Event: *Sound and Real-Time Systems*, Bartos Theater, MIT Cambridge, MA, February 15, 2012.

92) Special seminar, Media Lab 2012 Festival of Learning (January 28) and repeated upon student demand (February 13), Cambridge MA, *An Armchair Tour Through Frontier Physics*.

93) Special seminar, Media Lab 2012 Festival of Learning, Cambridge MA, *Extreme Rock from Japan*, January 27, 2013

94) Invited talk, *Research Visions*, and workshop, *Pervasive Sensing and Smart Energy* at the MIT Media Lab @Tokyo 2012 Symposium, Dentsu Hall, Tokyo Japan, January 17, 2012.

95) Invited talks in Japan: Nihon Unisys (NUL-G), Tokyo; DENSO HQ, Kariya; Sony Head Office, Shinagawa, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, January 16-19, 2012.

96) Invited talk, EU Future Emerging Technologies (FET) Human-Computer Confluence Consultation Workshop, Brussels Belgium, *Connecting to the Emerging Nervous System of Ubiquitous Sensing*, December 1, 2011.

97) Invited colloquium speaker, Tufts Music Dept., Medford MA, *Interaction in the Post-Convergence Age – From Electronic Music Controllers to Ubiquitous Dynamic Media*, November 14, 2011.

98) Invited talk, Tyndall Institute, Cork Ireland, *Living with Ubiquitous Sensing and Dynamic Responsive Media*, October 28, 2011.

99) Invited 3-lecture seminar, Transitio Festival Workshops, Mexico City, *Musical Control and Interaction from 1900 to 2020*, October 3-6, 2011.

100) Invited art/technology talk, Transitio Festival Symposium, Mexico City, Lugar/Espacio/Interfaz Session, *Untitled*, October 3, 2010.

101) Invited talk, One-Handed Musical Instruments (OHMI) Launch Event, Ars Electronica Center, Linz Austria, *Towards OHMI Instruments*, September 4, 2011.

102) Invited talk, Schneider Electric Research Center, Grenoble France, *Living with Ubiquitous Sensing and Dynamic Responsive Media,* July 1, 2011.

103)	Invited talk, INRIA In-Tech Symposium on Intelligence ambiante : évolution ou révolution?, INRIA Grenoble, France, *Living with Ubiquitous Sensing and Dynamic Responsive Media*, June 30, 2011.

104)	Invited panelist and talk, MIT 150 Forum on Future Cities, *Changing Cities*, Cambridge MA April 12, 2011.

105)	Invited talk, 2011 MIT Europe Conference – Innovation in a Networked World: Technology, People, and Places, Vienna Austria, *Living with Ubiquitous Sensing and Dynamic Responsive Media*, March 24, 2011.

106)	Event Co-Organizer and *Mammoth Modular Synthesizer* Music Installation, Music | Machines – 50 Years of Music and Technology @ MIT, Cambridge MA, February 5, 2011.

107)	Invited keynote, Design Innovation India Workshop, College of Engineering, Pune India, *Living with Ubiquitous Sensing and Dynamic Responsive Media,* January 28, 2011.

108)	Cisco Distinguished Lecture, *Living with Ubiquitous Sensing and Dynamic Responsive Media,* Cisco Headquarters, Milpitas CA, January 13, 2011.

109)	Invited talk, MIT MTL/MITEI Workshop on Next Generation μ-Energy Systems, Cambridge MA, *Applications and Requirements of Self-Powered Systems*, December 3, 2010.

110)	Invited talks in Japan: NEC Central Research Labs, Kawasaki; ALPS Tokyo; Fujitsu Laboratories, Tokyo; Toshiba Corporate Research and Development Center, Tokyo, *Living with Ubiquitous Sensing and Dynamic Responsive Media*, November 29-December 2, 2010.

111)	Invited talk, The Second Cisco/Intel Home Services Research Summit, Milpitas, CA, *Context, Control, and Conservation in the age of Ubiquitous Dynamic Media*, November 16, 2010.

112)	Invited talk, Qualcomm, San Diego CA, *Interacting with Rich Dynamic Media*, October 26, 2010.

113)	Invited talk, Nokia Research Center (NRC) Hollywood Lab, Santa Monica CA, *Interacting with Rich Dynamic Media*, October 25, 2010.

114)	Invited talk, Future of Retailing Symposium hosted by Best Buy, Richfield MN, *Physical Retail in the Age of Ubiquity*, September 14, 2010.

115)	Invited talk, Nokia Research Center (NRC) Cambridge UK, *Interacting with Rich Dynamic Media*, August 25, 2010.

116)	Invited talk, Microsoft Research (MSR) Cambridge UK, *Interacting with Rich Dynamic Media*, July 22, 2010.

117)   Invited talk, Intel My Connected Continuum (MC^2) Research Workshop, Santa Clara, CA, *Interacting with Rich Dynamic Media*, July 13, 2010.

118)   Invited talk, NIH Workshop on Personal Motion Technologies for Healthy Independent Living, NIH Headquarters, Bethesda MD, *Personal Motion Technology Project Examples*, June 23, 2010.

119)   Invited keynote lecture, Annual CIRMMT Symposium, Montreal Canada, *Interaction in the Post-Convergence Age - From Electronic Music Controllers to Ubiquitous Dynamic Media*, May 27, 2010.

120)   Invited talk, SRC/ATIC Forum on Minimum-Energy Electronic Systems (MEES 2020), Abu Dhabi UAE, *Body Area Sensor Platforms for Diverse Applications*, May 23, 2010.

121)   Invited colloquium speaker, Dartmouth College, Computer Science Dept., Hanover NH, *Living with Ubiquitous Sensing & Dynamic Responsive Media*, May 12, 2010.

122)   Invited participant, O'Reilly Foo Camp East, Microsoft New England R&D Center (NERD), Cambridge MA, April 30-May 2, 2010.

123)   Invited talk, Printed Electronics and Photovoltaics USA 2009, San Jose, CA, *Electronic Skins, Wearable Sensing, and Ubiquitous Media - Opportunities for Flexible Electronics*, December 2, 2009.

124)   Invited panelist and talk, ACM Sensys 2009, Berkeley CA, "Sensor Networks: The Next 10 Years," *Sensor Networks as Extension of our Nervous System*, November 5, 2009.

125)   Invited keynote lecture, IEEE International Workshop on Multimedia Signal Processing (MMSP 2009), Rio de Janerio, Brazil, *Linking Virtual and Real Worlds Through Ubiquitous Sensor Networks*, October 5, 2009.

126)   Invited talk, Intuit Future of Payments Workshop, MIT Cambridge MA, *"Transactions" in Ubiquitous Sensing & Media Environments*, September 17, 2009.

127)   Invited talk, NSF Workshop on Human-Environment Mobile-Based Interactions (HEMI), MIT Cambridge MA, *From Sensing People to Sensing Nature: Lessons Learned from Pervasive Computing*, September 15, 2009.

128)   Invited keynote, The 13'th International Symposium on Wearable Computing (ISWC 09), Linz, Austria, *A Decade of Exploration of Diverse Applications in Wearable Sensing*, September 5, 2009.

129)   Invited talk, NEC Central Research Labs, Kawasaki Japan, *Wearable Wireless Sensing Platforms*, August 13, 2009.

130)   Invited talk, LG Electronics Seocho R&D Center, *Sensor-based Interfaces and Virtual Reality*, August 11, 2009.

131) Invited talk, Samsung Advanced Institute of Technology (SAIT), Korea, *Beyond Mobility: Interaction, Interface, and Intention in the Age of Ubiquitous Sensing*, August 12, 2009.

132) Invited keynote in "Sharing.Experiences 2009: Life. Context. Choices (MIT Media Lab Workshop in Seoul)," Seoul Korea, *Living with Ubiquitous Sensing and Dynamic Responsive Media*, August 10, 2009.

133) Invited talk and panelist at SIGGRAPH 2009, New Orleans, LA, The Visual in New Interfaces for Musical Expression, *The Visual in NIME – Some Issues in Musical Control*, August 4, 2009.

134) Invited workshop participant and speaker, UW/Microsoft Summer Institute 2009, Semihhmoo Resort, WA, *Wearable Dynamic Management of Distributed Domestic Utilities*, July 28, 2009.

135) Invited talk, IBM Almaden Research Center, San Jose CA, *Living with Ubiquitous Sensing and Dynamic Responsive Media*, July 17, 2009.

136) Invited colloquium speaker, EMERGE Lecture Series, New York City College of Technology, Brooklyn NY, *Sensor Networks for Linking Virtual and Real Worlds*, May 6, 2009.

137) Invited talk and panelist at BodyNets 2009 (BodyNets Hardware and Software Platforms Session), UCLA, *Wearable Wireless Sensing Platforms*, April 3, 2009.

138) Invited plenary talk, Smart Fabrics 2009, Rome Italy, *From Wearable Sensing to Sensate Media – New Substrates for Smart Environments*, March 12, 2009.

139) Invited talk, panelist, and juror, MIT/ML Exploring Permeable Building Event, *Permeable Buildings*, Cambridge MA, February 6, 2009.

140) Invited talk, IDEO Cambridge Studio, Cambridge, MA, *Sensor Networks for Linking Virtual and Real Worlds*, January 7, 2009.

141) Invited panelist, MIT/ILP Conference on Robots: Informing Future Design for Human-Machine Interaction, Cambridge MA, *How Can Ideas from Robotics Help Create More Intelligent "Things that Think?,"* December 2, 2008.

142) Invited keynote, Ambient Intelligence Conference (AMI-08), Nuremberg Germany, *Sensor Networks for Linking Virtual and Real Worlds,* November 21, 2008.

143) Invited keynote, FIATECH 2008 Member Meeting, Cambridge MA, *Sensor Networks for Linking Virtual and Real Worlds*, October 27, 2008.

144) Invited talks in Japan: NEC Central Research Labs, Kawasaki; Hitachi Central Research Laboratory (CRL), Kokubunji, Brother Industries, Nagoya; Toshiba, Kawasaki; Dai Nippon Printing (DNP) Tokyo, *Sensor Networks for Linking Virtual and Real Worlds*, September 22-26, 2008.

145) Invited talk, Intel Research (Roy Want Group), Santa Clara CA. *On-Body Wireless Sensing for Human-Computer Interfaces*, July 11, 2008.

146) Invited keynote lecture, 5th International Workshop on Wearable and Implantable Body Sensor Networks (BSN 2008), Chinese University of Hong Kong, *On-Body Wireless Sensing for Human-Computer Interfaces*, June 1, 2008.

147) Invited talk, Center for Design Innovation, Winston-Salem NC, *Sensor Networks for Pervasive Computing (& Musical Interfaces!)*, May 6, 2008.

148) Invited talk, Microsoft Research (MSR), Redmond WA, *Sensor Networks for Linking Virtual and Real Worlds*," April 30, 2008.

149) Invited talk, Yale University School of Architecture, "Sustainable Architecture, Today and Tomorrow: Reframing the Discourse" Symposium, New Haven, CT, *Responsive Environments*, April 5, 2008.

150) Invited talk, Qualcomm, San Diego, CA, *Energy Harvesting for Mobile Computing*, March 26, 2008.

151) Invited talk, Nokia Research Center (NRC), Palo Alto CA, *Sensor Networks for Pervasive & Wearable Application*s, January 28, 2008.

152) Invited talk, Tokyo Denki University, Tokyo Japan, *Sensor Nets for Wearable and Pervasive Applications - A Decade of Exploration at the MIT Media Lab*, January 21, 2008.

153) Invited corporate talks in Japan: Hitachi Research Laboratory (HRL), Oomika; NEC Central Research Laboratories, Kawasaki; Alps Electric, Sendai; KKE, Tokyo: *Sensor Networks for Pervasive & Wearable Application*s, January 15,18,22, 2008.

154) Invited talk, MIT Media Lab Tokyo Event, Tokyo Japan, *Sensor Networks to Augment Human Perception*, January 17, 2008.

155) Invited talk, Yamaha Corporation, Hamamatsu Japan, *Sensor Networks for Pervasive Computing (&Musical Interfaces!)*, July 16, 2008.

156) Invited talk, "Nokia World," Amsterdam, The Netherlands, *Smart Spaces*, December 5, 2007.

157) Invited talk, "IEEE Workshop on Wearable Technology in Medicine" at the "Center for Connected Health 2007 Symposium," Harvard Medical School, Boston MA, *Body Sensor Networks in Medicine, Social Computing, and the Arts*, October 23, 2007.

158) Invited presentation, Motorola Innovation Conference, "People and Things to Things" Session, Schaumburg, IL, *Dual Reality – A New Initiative @ the MIT Media Laboratory*, September 12, 2007.

159) Invited lecture, Bavaria California Technology Center (BaCaTeC) Summer School, "Pervasive Healthcare systems," Kloster Seeon, Germany, *On-Body Sensing & Related Applications at the MIT Media Lab*, August 1, 2008.

160) Invited talk, Sensormatic Corporation, Boca Raton, Florida, *Recent Developments & Ongoing Projects in Sensor Networks*, July 23, 2007.

161) Invited talk, Agilent Corporation, Santa Clara California, *Embedded Sensing for Ubiquitous and Pervasive Comptuing,* July11, 2007.

162) Invited panelist, *Virtual Worlds Technology & Systems Design,* session at "IBM & MIT Present Virtual Worlds: Where Business, Society, Technology & Policy Converge," Cambridge MA, June 15, 2007.

163) Invited keynote, BodyNets 2007, *A Decade of Body Sensor Networks in Medicine, Sports, Entertainment & the Arts*, Florence Italy, June 11, 2007.

164) Invited tutorial, Pervasive 2007 (The 5'th International Conference on Pervasive Computing), Toronto, Ontario, *Designing and Building Ubiquitous Sensor Systems*, May 16, 2007.

165) Invited keynote speaker at the NSF Workshop on "Rising To The Challenge: Integrating Social Science Into NSF Environmental Observatories Symposium," Washington DC, *Human Sensing*, January 25, 2007.

166) Invited keynote speaker, Micro-Energy Harvesting Institute Inaugural Meeting, IMTEK (University of Freiberg, Germany), *Perspectives on Parasitic Power*, March 13, 2007.

167) Invited keynote speaker, T3Lab Symposium, University of Bologna, Italy, *Human-Centric Sensor Networks at the MIT Media Laboratory*, February 27, 2007.

168) Invited seminar, INnet08 - *Nuove Interazioni, Le Nuove Ricerche Interattive al Media Lab dell' MIT di Boston – The Responsive Environments Group*, Gallarate, Italy, February 2-3, 2007.

169) Invited keynote speaker at the NSF Center for Networked Embedded Sensing (CENS) Annual Meeting, UCLA, Westwood CA, *From Interactive Dancers to Digital Skins - Sensor networks at the MIT Media Lab*, October 27, 2006.

170) Invited talk, Power To Go - Fraunhofer Symposium Mikroenergietechnik, Berlin Germany, *International Trends in Micro Energy Technology*, October 10, 2006.

171) Invited talk, Motorola Energy Summit 2006, Motorola Research, Libertyville, IL, *Energy Harvesting for Mobile Computing*, September 6, 2006.

172) Invited keynote, 3rd IEEE-EMBS International Summer School and Symposium on Medical Devices and Biosensors, MIT Cambridge MA, *Body Sensor Networks in Medicine, Sports, and the Arts*, September 5, 2006.

173) Invited panelist and speaker, 2006 NDIA and ONR Naval S&T Partnership Conference, Washington DC, *Energy Sources and Power Management for Embedded Wireless Sensors*, August 2, 2006.

174) Invited speaker for special session "Beyond Low Power Design: Environmental Energy Harvesting," IEEE Design Automation Conference (DAC 2006), San Francisco, CA, *Systems for Human Powered Mobile Computing*, July 26, 2006.

175) Invited talk, Sun Microsystems, Menlo Park, CA, *Wireless Sensing at the Frontiers of Pervasive and Social Computing*, July 25, 2006.

176) Invited talk, Workshop on Energy and Materials: Critical Issues for Wireless Sensor Networks, Dublin City University (DCU), *Energy Harvesting for Mobile Systems*, June 30, 2006.

177) Invited external speaker, Nokia Research Center Agenda 2013 and NVO Strategy Sharing event for Nokia Business and Horizontal Groups, Helsinki Finland, *Wireless Sensing at the Frontiers of Pervasive and Social Computing*, June 13, 2006.

178) Invited panel chair, "Applications: Beyond Dumb Data Collection," and panelist/speaker *Some Evolving Sensor Net Applications*, EmNets 2006, Harvard University, Cambridge MA, May 31, 2006.

179) Invited speaker, NSTI Nanotech 2006 Conference, Boston MA, *Some Novel Applications for Wireless Inertial Sensors*, May 10, 2006.

180) Invited speaker, NEC Technology Forum, Tokyo Japan, *Wireless Sensing at the Frontiers of Pervasive and Social Computing*, March 13, 2006.

181) Invited speaker, Slumberger Research, Ridgefield, CT, *Embedded Sensing for Pervasive Computing*, February 28, 2006.

182) Invited speaker, Sensormatic/Tycho Corporation, Boca Raton, Florida, *Embedded Sensing for Pervasive Computing*, February 24, 2006.

183) Invited speaker, Motorola Research Media Lab Symposium, Schaumburg, IL, *Embedded Sensing for Pervasive Computing,* January 31, 2006.

184) Featured speaker, "Experience The Future!" Symposium, hosted by Moda Tecnologia, Milan Italy, *Sensor Technology Impacting Fashion & Retail*, January 24, 2006.

185) Invited participant, Second Meeting of the Nokia Academic Working group on Sensor Nets, San Diego, California – contribution: *Sensor Nets for Pervasive Computing*, November 1, 2005.

186) Invited talk at the 2005 Wireless Congress in Munich, Germany, *Wireless Technologies – The Future*, November 9, 2005.

187) Invited Talk presented at the 20 Jahre Fraunhofer IIS Symposium, Erlangen, Germany, *New Sensor Architectures for Things That Think*, July 1, 2005.

188) Invited Talk presented at the IEE International Seminar on Intelligent Building Environments (IBE 05), Colchester UK, *New Sensor Architectures for Responsive Environments,* May 28, 2005.

189) Invited talk at the National Sensor Center, Dublin City University (DCU), *Wireless Sensing for Interactive Media*, June 7, 2005.

190) Invited Keynote presented at the IEEE International Symposium on Collaborative Technology Systems (CTS 2005), St. Louis, MO, *Collaborative Interaction and Responsive Environments - Sensors That Enable Individuals and Instrument Multitudes*, May 19, 2005.

191) Invited participant in the *Nokia Workshop on Large-Scale Wireless Sensor Networks and their Applications*, Kuusamo, Finland; presentation: *Wireless Sensing for Interactive Media*, February 4-5, 2005.

192) Invited talk, MIT Center for eBusiness, Cambridge MA: *New Wrinkles on RFID at the MIT Media Laboratory*, November 17, 2004.

193) Invited talk, MIT SDM (System Design and Management) Conference on Innovative Product and System Development, Cambridge MA: *New Sensor Architectures for Responsive Environments*, October 22, 2004.

194) CS Colloquium, Purdue University, Advanced Computer Systems Laboratory: *New Sensor Architectures for Responsive Environments*, October 13, 2004.

195) Invited exhibition of the self-powered wireless switch at the ALPS Pavilion at the GM Techworld Exhibition, Detroit, Michigan, October 5, 2004.

196) Invited panelist and presenter at SIGGRAPH 2004 special session on *Computer Music*, Los Angeles, California: *New Paradigms for Musical Control*, August 10, 2004.

197) Invited brainstorming panelist for Caterpillar engine division, Peoria, IL, presentation: *Frontiers of Wireless Sensing*, July 7, 2004.

198) Invited all-day seminar at Media Lab Europe, Dublin: *Sensor Systems for Interactive Environments*, June 16, 2004.

199) Invited talk at the Changing Reality Workshop, Media Lab Europe, Dublin: *Embedded Sensing to Change Reality*, June 15, 2004.

200) Invited talk at Yamaha Research, Hamamatsu Japan: *New Paradigms for Musical Control*, June 4, 2004.

201) Invited talk at Brother Research, Nagoya Japan: *Sensor Architectures for Everywhere Interfaces*, June 2, 2004.

202) Invited talk at Ricoh Research Center, Tokyo Japan: *Sensor Architectures for Everywhere Interfaces*, June 1, 2004.

203) Invited talk at Fujitsu Research, Tokyo Japan: *Sensor Architectures for Everywhere Interfaces*, June 1, 2004.

204) Invited talk at Hitachi Research, Tokyo Japan: *Sensor Architectures for Everywhere Interfaces*, May 31, 2004.

205) Invited talk at Toshiba Research, Tokyo Japan: *Sensor Architectures for Everywhere Interfaces*, May 31, 2004.

206) Invited talk at the Acoustical Society of America's (ASA) 75'th Anniversary Meeting, New York City, *New Paradigms for Musical Control*, May 25, 2004.

207) Invited talk at ONE Telecommunications, Vienna, Austria: *Sensor Architectures for Everywhere Interfaces*, April 27, 2004.

208) Invited keynote talk at the Workshop on *Everywhere Interfaces*, hosted by the Johannes Kepler University of Linz, Austria (held in Vienna): *Sensor Architectures for Everywhere Interfaces*, April 26, 2004.

209) Invited talk at the TTI Vanguard *Powering the Future Workshop*, Montreal, Canada: *Energy Harvesting for Mobile Computing*, April 19, 2004.

210) Invited talk at BT Research, Adastral Park, Martlesham, Ipswich UK: *Sensor Systems for Responsive Environments*, April 8, 2004.

211) Invited keynote talk at the First International Workshop on Wearable and Implantable Body Sensor Networks, Imperial College, London: *Wearable Wireless Sensing for Interactive Media*, April 7, 2004.

212) Invited colloquium talk at the Institute for Neuroinformatics, ETH Zurich: *New Sensor Architectures for Responsive Environments*, March 5, 2004.

213) Invited talk at Motorola Headquarters, Shamberg, IL: *Responsive Environments*, December 3, 2003.

214) Invited talk at Microsoft Research, Seattle Washington: *New Sensor Architectures for Responsive Environments*, December 2, 2003.

215) Invited panelist at the GM Driver/Vehicle Interaction Workshop, Detroit, Michigan, November 6, 2003.

216) Invited talk at the School of Engineering and Applied Science's Strategic Planning Workshop on Engineering, Humanities, and the Arts, Princeton University, Princeton NJ: *From Chaos to Convection and Tangibles to Toolkits – Interdisciplinary Perspectives from the MIT Media Lab*, November 3, 2003.

217) Invited talk in the *Engaging Characters* Panel hosted by the Art Interactive Gallery, Cambridge MA: *Expressive Interfaces – Examples & Directions*, October 3, 2003.

218) Invited presentation at the NSF Electrical and Communications Systems (ECS) Division Workshop on Wireless Networked Sensor and Actuator Systems and Grantees Meeting, UCLA, Los Angeles, CA: *Towards Sensate Media and Electronic Skins – Testbeds for Very High Density Sensor Networks*," September 8, 2003.

219) Invited talk at Saab Training Systems, Jonkoping, Sweden: *Sensor Technologies for Responsive Environments*, June 3, 2003

220) Invited keynote talk at the New Interfaces for Musical Expression (NIME 2003) Conference, McGill University, Montreal, Canada: *Expressive Interfaces – Examples & Directions*, May 22, 2003.

221) Invited talk at the Intel Research Lab, Seattle, Washington: *Sensate Media for Responsive Environments*, April 25, 2003.

222) Invited talk at Intel Research, Portland, Oregon: *Sensate Media for Responsive Environments*, April 24, 2003.

223) Invited talk at the *Extreme Communications* ILP event, MIT Wong Auditorium: *Communication and Sensing at the Extremities*, April 15, 2003.

224) Invited talk at the 7'th Annual Festival of Art and Technology (Video, Technology, and Performance), Brown University, Providence RI: *Expressive Interfaces – Some Recent Examples*, April 5, 2003.

225) Invited colloquium talk at the Sonic Arts Research Center (SARC), Queens University, Belfast, Northern Ireland: *Expressive Interfaces – Some Recent Examples*, February 13, 2003.

226) Invited talk at the Innovating Innovation Symposium at Media Lab Europe in Dublin: *From Chaos to Convection and Tangibles to Toolkits – How Innovation Happens at the MIT Media Lab*, February 11, 2002.

227) Invited talk at Motorola Labs, Plantation Florida*: Sensor Technologies for Responsive Environments*, January 24, 2003.

228) Invited talk at the final DARPA SensIT PI Meeting: *High-Density Wireless Sensing Projects*, Waltham, MA, November 8, 2002.

229) CS Colloquium at Tufts University, Medford MA*: Sensor Technologies for Responsive Environments*, November 6, 2002.

230) Invited talk at Saabtech Systems in Stockholm, Sweden: *Sensor Technologies for Responsive Environments*, July 5, 2002.

231) Invited panelist at the *Managing as Designing Workshop*, Weatherhead School of Management, Case Western Reserve University, Cleveland, Ohio: *From Trash Heaps to Toolkits and Chaos to Convention – Management and Innovation at Leading Edge Design Organizations and Idea Labs*, June 14-15, 2002.

232) Invited talk at CCRMA (Center for Computer Research in Music and Acoustics), Stanford University: *Expressive Interfaces – Some Recent Examples*, March 11, 2002.

233) Invited talk at the *FreeSpace Symposium* at Duke University: *Expressive Interfaces – Some Recent Examples*, February 22, 2002.

234) Invited talk at the *Extreme Interfaces Symposium* at Media Lab Europe in Dublin: *Sensing at the Extremes*, January 28, 2002.

235) Invited talk at the EU *This is Not a Computer Workshop* at the University of Limerick in Ireland: *Disappearing Computers or Mutating Machines?*, January 24, 2002.

236) Invited talk at Schott Glass, Mainz, Germany: *Sensor Technologies for Responsive Environments*, August 23, 2002.

237) Invited talk at StatOil Research, Trondheim, Norway: *Recent Research in Responsive Environments*, June 21, 2002.

238) Invited talk at the 2002 ILP *Bringing MIT to Europe* Conference in Vienna, Austria: *Recent Research in Responsive Environments*, June 19, 2002.

239) Invited talk on energy storage and power harvesting for the Portable Power Group at the Gillette Advanced Technology Center in Needham MA, November 30, 2001.

240) Invited presentation at the *Redesigning the Future Symposium* in Tokyo: *Responsive Environments*, November 9, 2001.

241) Invited talk on Musical Interfaces at the American Composers Orchestra Conference, New York, NY: *Interfaces for Musical Performances and Interaction*, October 12, 2001.

242) Invited lecture/demonstration of the *Expressive Footwear* System, Ars Electronica Festival, Linz Austria, September 4, 2001.

243) Invited research seminar at the Music Technology Group, Universitat Pompeu Fabra, Barcelona Spain: *From Hypercellos to Expressive Footwear - New Musical Interfaces at the MIT Media Lab*, June 18, 2001.

244) Invited talk at the IBM Academy of Technology, 2001 Make IT Easy Conference, IBM Almaden Research Lab, CA: *Modern Sensor Technologies for Interactive Environments*, June 6, 2001.

245) Featured speaker, IEEE Signal Processing Society New England monthly meeting: *Sensor Technology and Signal Processing for Responsive Environments*, May 22, 2001.

246) Invited talk, MIT Industrial Liaison Program (ILP), 2001 MIT Research Director's Conference: *Wireless Applications at the MIT Media Lab*, April 19, 2001.

247) Invited talk at the Third Wave of Connectivity Conference, IBM Academy of Technology, IBM T.J. Watson Research Center, Yorktown Heights NY, *Challenges and applications for sensor technology in pervasive networks*, April 18, 2001.

248) Demonstration of *Musical Trinkets* system at the Experience Music Center, Seattle WA, April 2, 2001.

249) Invited Lecture/Demonstration of *Expressive Footwear* System, Boston Museum of Science, March 4, 2001.

250) Invited lecture/demonstration of the *Expressive Footwear* System at the ISEA 2000 Conference in Paris, France, December 10, 2000.

251) Invited talk, Immersive Media Group, IBM T.J. Watson Research Center, Hawthorne NY: *New Sensor Systems for Responsive Environments at the MIT Media Lab*, November 8, 2000.

252) Invited talk at Laboratorio di Informatica Musicale, University of Genoa, Italy, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, October 17, 2000.

253) Invited seminar at MediaLabEurope, Dublin: *New Sensor Systems for Responsive Environments at the MIT Media Lab*, September 18, 2000.

254) Invited talk at USIX usability conference, Helsinki Finland, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, September 4, 2000.

255) Invited *Things That Think* seminar at Westvaco Corporation Research Center, Columbia MD, August 11, 2000.

256) Invited talk: *Computation, Communication, and Sensing: Issues and Applications* and panelist for the Comm'n Sense: Wireless Sensor Networks session of ACM MOBICOM 2000, Boston MA, August 8, 2000.

257) Invited research seminar at the National Microelectronics Research Center (NMRC) in Cork, Ireland: *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, July 18, 2000.

258) Invited demonstrations of the *Expressive Footwear* system, Discover Awards Expo, EPCOT Center, Disney World, Orlando FL, June 22-23, 2000.

259) Invited presentation at the DARPA Energy Harvesting Review, Washington DC, *Parasitic Power Harvesting at the MIT Media Lab*, April 13, 2000.

260) Invited talk (*Renewable Energy Sources for the Future of Mobile and Embedded Computing*) and panel at the Renewable Computing Session of the Intel Computing Continuum Conference, San Francisco CA, March 16, 2000.

261) Colloquium speaker, NASA Goddard Spaceflight Center, Greenbelt MD, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, March 6, 2000.

262) Invited talk (*Responsive Environments*), panel, and research demonstrations at the Human Centered Innovation Conference, Intel Research Laboratory, Portland OR, January 21, 2000.

263) Invited moderator of Embedded Devices and Bluetooth Technology sessions at the Bluetooth Developer's Symposium, Los Angeles CA, December 8, 1999.

264) Invited presentation (*Laser Tracking for Interactive Surfaces*) and demonstration of *LaserWho* installation at Opera Totale 4, Venice-Meistre, Italy, November 19, 1999.

265) Keynote address at the CASCON conference, hosted by IBM and the NRC (National Research Council of Canada), Toronto, Ontario, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, November 9, 1999.

266) Invited lecture (*From Musical Chairs to Magic Carpets: Art meets Science at the MIT Media Laboratory*) and panel at Chautauqua Seminar on High-Performance Computing and the Arts, Boston University, September 16, 1999.

267) Invited seminar at the Intel Research Laboratory, Jones Farm, Hillsboro OR, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab,* July 28, 1999.

268) Invited Presenter/participant at *Microsoft/UW Workshop on Invisible Computing*, Seattle and Semi-Ah-Moo, WA, July 19-23, 1999.

269) Invited talk at HP Research Laboratory, Palo Alto CA, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, June 3, 1999.

270) Invited seminar on musical interfaces for the Performing Arts Electrocuted Workshop, University of Limerick, Ireland, May 25, 1999.

271) Invited talk (*Significant Recent Developments Concerning Mobile Computing*) and panel on Pervasive Computing at ACM SIGPLAN (Federated Computing Conference), May 3, 1999.

272) Featured presenter at the MIT Enterprise Forum, Geneva Switzerland, *New Sensor Applications for Interactive Environments at the MIT Media Lab*, April 16, 1999.

273) Invited panelist (*The Future of Play*) and *Expressive Footwear* demonstrations at Tokyo Toy Fair, Tokyo Japan, March 18, 1999.

274) Featured speaker at the British Telecom Global Information Exchange seminar in NYC, *The Revolution in Information Infrastructure*, February 11, 1999.

275) Guest Lecture and *Expressive Footwear* Demonstration at Cornell University Arts Department, Ithaca NY, December 2, 1998.

276) Invited performance with *Expressive Footwear* at the Toshiba Wearable Computing Fashion Show, NIKOGRAPH 1998, Tokyo Japan, November 25, 1998.

277) Session organizer, Hardware Connectivity Roundtable at the *Things That Link Workshop*, Helsinki Finland, August 24, 1998.

278) Keynote address, Unisys Technology Conference, Chantilly VA, *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Lab*, August 10, 1998.

279) Invited talk, IBM Academy Topical Conference on Pervasive Computing, IBM T.J. Watson Research Laboratory, Yorktown Heights NY, *Things That Think*, June 22, 1998.

280) Invited talk at IBM Almaden Research Lab, *Musical Chairs and Magic Carpets: New Sensor Applications for Interactive Environments at the MIT Media Lab*, May 15, 1998.

281) Invited talk at Xerox PARC, Palo Alto CA, *Musical Chairs and Magic Carpets: New Sensor Applications for Interactive Environments at the MIT Media Lab*, May 14, 1998.

282) Invited talk at Interval Research, Palo Alto, CA, *Musical Chairs and Magic Carpets: New Sensor Applications for Interactive Environments at the MIT Media Lab*, May 13, 1998.

283) Invited talk at Creative Technology Research Laboratory, Scott's Valley, CA, *Musical Chairs and Magic Carpets: New Sensor Applications for Interactive Environments at the MIT Media Lab*, May 11, 1998.

284) Featured presenter, IMAPS (International Microelectronics and Packaging Society) New England Annual Meeting, *Musical Chairs and Magic Carpets: New Sensor Applications for Interactive Environments at the MIT Media Lab*, December 5, 1997.

285) Featured seminar at the British Telecom Global Executive Forum in Southampton, UK, *The Changing Face of Technology for Information and Communications*, July 17-18, 1997.

286) Featured presenter at the British Telecom Global Information Exchange seminar in Southampton, UK, *The Changing Face of Technology for Information and Communications*, July 16, 1997.

287) Invited talk at Nortel Research, Ottawa Canada, *Musical Chairs and Magic Carpets: New Sensor Applications for Interactive Environments at the MIT Media Lab*, June 2, 1997.

288) Invited presentation at the XWIT (Cross-Industry Working Group on Information Technology) Wireless and Nomadic Technologies and Applications Symposium, Schaumburg IL, *Personal Area Networks and Passive Wireless* Tags, May 7, 1997.

289) Featured presenter at the British Telecom Global Information Exchange seminar in Cape Town, South Africa, *The Changing Face of Technology for Information and Communications*, April 30, 1997.

290) Featured seminar at the British Telecom Global Executive Forum in Cape Town, South Africa: *The Changing Face of Technology for Information and Communications*, April 28 and May 2, 1997.

291) Featured speaker at the IEEE New England Aerospace and Electronics Colloquium *Musical Chairs and Magic Carpets: Things That Think at the MIT Media Laboratory,* April 16, 1997.

292) Invited talk and panelist in the Computerized Live Performance Session at the 6'th Biennial Symposium on Arts and Technology, Connecticut College, New London CT, March 1, 1997.

293) "Hypersymposium" panel on the future of electronic musical instruments at the *Now You See It* Festival at Southbank, London, March 9, 1996.

294) Invited talk at the Lawrence Livermore National Laboratory, *Computers, Communication, and Entertainment; Art Meets Science at the MIT Media Laboratory*, January 12, 1996.

295) MIT/Draper Guidance, Navigation, and Control (GN&C) Colloquium, *A Highly Adaptable Method of Managing Jets and Aerosurfaces for Control of Aerospace Vehicles*, Spring 1990.

296) NASA/JSC research seminar, *A Global Approach to Attitude Control with Non-Linear Actuators*, March 22, 1990.

297) NASA/JSC research seminar, *Application of Search Techniques to Control of Spacecraft with Single-Gimbaled CMGs*, January 25, 1989.

298) Carnegie Mellon University, Invited Physics Dept. Lecture, *Development and Applications of the Central Detector at L3*, February 1984.

299) Northeastern University, Invited Physics Dept. Lecture, *Development and Applications of the Central Detector at L3*, February 1984.

300) MIT High-Energy Physics LNS Colloquium, *Massive μ+ μ- Production at the ISR,* October 1981.

301) Princeton University, Invited Physics Dept. Lecture, *Massive μ+ μ- Production at the ISR,* September 1981.

302) Tufts University, Invited Physics Dept. Lecture, *Massive μ+ μ- Production at the ISR,* September 1981.

22. Record of Research Funding for Joseph A. Paradiso

Title	Company	Dates	Amount/YR
Things That Think[1,2]	Industry Consortium	1/95-present	~$6M/yr
Low-power wireless sensor system for environmental monitoring[*]	EDF	1/16-1/17	$50K
Wearable Sensory Augmentation[*]	Qualcomm	4/15	$50K
CHAIN-API RESTful Sensor Framework[*]	EMC, Inc.	1/15-12/15	$75K
Intelligent Multimodal Sensor Networks for Computing[*]	Cisco, Inc.	12/13	$100K
Center for Terrestrial Sensing[2]	Saudi Aramco	11/13-11/16	$1M/yr
Glass Research Fund[*]	Google, Inc.	10/13	$14K
2013 Alumni Class Fund Award[2]	MIT	7/13	$24K
Emerging Technologies in Location & Context-Aware Computing[*]	Intel Corp.	6/11-present	$180K
Research in Wearable Wireless Sensing[*]	Nokia Corp.	6/09	$25K
High Dynamic Range Wireless Wearable Sensing & Analysis for Athletes[*]	Boston Red Sox	11/07-2/10	$170K
Towards Sensate Media and Electronic Skins: Testbeds for Very High Density Sensor Networks[*]	NSF	11/02-11/05	$100K/yr
Detecting Activity in Homes with Ubiquitous Sensing to Support Aging in Place[2]	NSF	7/03-7/05	$160K/yr
Portable Gait Evaluation & Biofeedback Intervention Tool[2]	CIMIT	8/01-8/02	$25K/yr
Embedded Sensor Packs (ESP) in the Field[2]	DARPA	1/99-1/01	$1M/yr
New Sensors for Telecommunications[*]	Nortel Networks	1/98 - 1/01	$125K/yr
Precision Alignment for the GEM Detector[*]	DOE (SSC Lab)	1/93 - 6/94	~$150K
Fractal-based Image Processing[2]	Draper Lab (IR&D)	7/89 - 7/90	~$75K
Advanced Spacecraft Control[*]	NASA/JSC (RTOP)	1/89 - 1/91	~$150K
Hybrid Control for Aerospace Vehicles[*]	Draper Lab (IR&D)	7/86 - 11/88	~$150K

ROLES:
[*] - Principal Investigator (PI)
[1] - Co-Director, 2001-2005, 2007-2015
[2] - Co-PI

23. Theses Supervised by Joseph A. Paradiso

Summary			
Degree	Total	Completed	In Progress
S.B.	12	12	0
Diplom Theses			
As Advisor	2	2	0
M.Eng.			
As Advisor	21	21	0
S.M.			
As Advisor	31	29	2
As Reader	79	72	7
Ph. D.			
As Advisor	13	11	2
As Reader	31	28	3

S.B. Theses

As Advisor:

Paelle M. Powell, "Design and Fabrication of Injection-Molded and 3D-Printed Battery Clips for "Chibitronics" Circuit Sticker Workbook," 6/15 (Mechanical Engineering).

Ezequiel (Zeke) Schmois, "Doppel 2.0: Optimization of a Multimodal Sensor Network," 12/13 (EECS).

Ashley K. Turza, "Dense, Low-Power Environmental Monitoring for Smart Energy Profiling," 6/10 (Mechanical Engineering).

Adam N. McCaughan, "Soundscaper: A Novel Instrument for Tangible and Intuitive Sound Synthesis," 8/08 (EECS).

Roshni Cooper, "Initial Implementation of the µTags Localization Transponders," 5/07 (EECS).

Matthew Moskwa, "A Base Station for Data Collection for Sensor-Equipped Active RFID Tags," 2/07 (EECS).

Cameron Lewis, "Prototyping and Expanding a Tool Set for a Ubiquitous Sensor Infrastructure," 12/06 (EECS).

Mateusz Malinowski, "Optical Wakeup of Micropower Tags for Object Location and Identification," 5/04 (EECS).

Joshua Randall, "Real-time Lighting System for Large Group Interaction," 5/02 (EECS).

Manu Seth, "Improvements to the Power Conditioning Circuitry for a Self-Powered Wireless Switch," 6/02 (EECS).

Jeffrey Y. Hayashida, "Unobtrusive Integration of Magnetic Generator Systems into Common Footwear," 6/00 (Mechanical Engineering).

Clyde J. Kendall, "Parasitic Power Collection in Shoe-Mounted Devices," 6/98 (Physics).

Diplom Theses

As Research Advisor:

Nan Zhao, "Smart Solid-State Lighting Control," 9/10 (Diplom – RWTH Aachen, Lehrstuhl Für Medizinische Informationstechnik).

Clemens Satzger, "Fusion of Six-Dimensional Sensor Data Using Physics Engines," 1/10 (Diplom – TU München, Institute for Media Technology).

M.Eng. Theses

As Advisor:

Evan Lynch, "SensorChimes: Musical Mapping for Sensor Networks toward Augmented Acoustic Ecosystems," 2/16 (EECS).

David Way, "EMGRIE: Ergonomic Microgesture Recognition and Interaction Evaluation, A Case Study," 1/14 (EECS).

Nicholas D. Joliat, "DoppelLab: Spatialized Data Sonification in a 3D Virtual Environment," 2/13 (EECS).

Rachel M. Bainbridge, "HCI Gesture Tracking Using Wearable Passive Tags," 9/10 (EECS).

Berham F.T. Mistree, "A Flexible High-Density Sensor Network," 9/08 (EECS).

Robert N. Jacobs, "A Wireless Sensor-based Mobile Music Environment Compiled from a Graphical Language," 9/07 (EECS).

Mateusz K. Malinowski, "Micropower Active Tags for Shipment Monitoring and Identification," 2/07 (EECS).

Daniel Sang Kim, "Sensor Network Localization Based on Natural Phenomena," 8/06 (EECS).

Michael J. Broxton, "Localization and Sensing Applications in the Pushpin Computing Network," 2/05 (EECS).

Stephen D. Lovell, "A System for Real-Time Gesture Recognition and Classification of Coordinated Motion," 1/05 (EEES).

Che King Leo, "Contact and Free-Gesture Tracking for Large Interactive Surfaces," 6/02 (EECS).

Laurel P. Smith, "From Musical Trinkets to Musical Instruments - An Improved Swept RF Tagging System," 1/02 (EECS).

Leila M. Hasan, "Visual Frets for a Free-Gesture Musical Interface," 6/01 (EECS).

Nisha Checka, "A System for Tracking and Characterizing Acoustic Impacts on Large Interactive Surfaces," 5/01 (EECS).

Zoe C. Teegarden, "Embedded Low-Power Wireless Sensor System: Design of a Software Radio Base Station," 4/01 (EECS).

Christopher T. Yang, "New Laser Range Finder Designs For Tracking Hands Atop Large Interactive Surfaces," 3/01 (EECS).

Kai-Yuh E. Hsiao, "Fast Multi-Axis Tracking of Magnetically Resonant Passive Tags: Methods and Applications," 2/01 (EECS).

Ara N. Knaian, "A Wireless Sensor Network for Smart Roadbeds and Intelligent Transportation Systems," 6/00 (EECS).

Phillip J. Rowe, "Characterization of a Wideband Monopulse Piezoelectric Direction Finder," 6/99 (EECS).

Eric Hu, "Applications of Expressive Footwear," 4/99 (EECS).

Joshua Strickon, "Design and HCI Applications of a Low-Cost Scanning Laser Rangefinder," 1/99 (EECS).

S.M. Theses

As Advisor:

Irmandy Wicaksono, "StretchyKeyboard: Design and Implementation of Multi-sensory Fabric for Deformable Musical Interface," 12/16 (EE Dept., ETH Zurich).

David Ramsay, "LearnAir: Toward Intelligent, Personal Air Quality Monitoring," 8/16 (MAS).

Asaph Azaria, "INTELLIGENT AMBIANCE: Digitally mediated workspace atmosphere, augmenting experiences, and supporting wellbeing," 8/16 (MAS).

Juliana Cherston, "Auditory Display For Maximizing Engagement and Attentive Capacity," 8/16 (MAS)

Vasant Ramasubramanian, "Quadra-Sense: Confluence of UAVs, Enviornmental Sensor Networks and Augmented Reality," 8/15 (MAS).

Spencer Russell, "Auditory Augmented Reality in Expansive Spaces," 8/15 (MAS).

Pragun Goyal, "CAD Enabling Hand-tools," 5/14 (MAS).

Sara Pfenninger, "A People-Tracking System Utilizing Particle Filters in a Non-Overlapping Sensor Network," 10/13 (EE Dept., ETH Zurich).

Brian D. Mayton, "WristQue: A Personal Sensor Wristband for Smart Infrastructure and Control," 2/13 (MAS).

Gershon Dublon, "Beyond the Lens: Communicating Context through Sensing, Video and Visualization," 9/11 (MAS).

Laurel S. Pardue, "Expressive Re-Performance," 9/11 (MAS).

Alexander J. Reben, "Interactive Physical Agents for Story Gathering," 6/10 (MAS).

Matthew Aldrich, "Dynamic Solid State Lighting," 6/10, (MAS).

Nan-Wei Gong, "Configurable Dynamic Privacy for Pervasive Sensor Networks," 9/09 (MAS).

Michael T. Lapinski, "A Wearable, Wireless Sensor System for Sports Medicine," 9/08 (MAS).

Manas Mittal, "Ubicorder: A Mobile Interface to Sensor Networks," 9/08 (MAS).

Jason M. LaPenta, "Real-time 3-d Localization using Radar and Passive Surface Acoustic Wave Transponders," 8/07 (MAS).

Ryan P. Aylward, "Sensemble: A Wireless Inertial Sensor System for Interactive Dance and Collective Motion Analysis," 9/06 (MAS).

Gerardo Barroeta Pèrez, "S.N.A.K.E.: A Dynamically Reconfigurable Artificial Sensate Skin," 9/06 (MAS).

Mathew J. Laibowitz, "Parasitic Mobility for Sensate Media," 8/04 (MAS).

David J. Merrill, "FlexiGesture: An sensor-rich real-time adaptive gesture and affordance learning platform for electronic music control," 6/04 (MAS).

Hongshen Ma, "Capacitive Displacement Sensing for the Nanogate," 2/04 (MAS).

Mark C. Feldmeier, "Large Group Musical Interaction using Disposable Wireless Motion Sensors," 9/02 (MAS).

Johsua H. Lifton, "A Platform for Distributed Embedded Ubiquitous Computing," 9/02, (MAS).

Ari Y. Benbasat, "Design of a Compact Inertial Measurement Unit and an Associated Analysis, Gesture Recognition and User Feedback Framework," 9/00 (MAS).

Ari T. Adler, "A Cost-Effective Portable Telemedicine Kit for Use in Developing Countries." 6/00 (Mechanical Engineering).

Nathan Shenck, "A Demonstration of Useful Electric Energy Generation from Piezoceramics in a Shoe," 5/99 (EECS).

Nazareth Sarkis Bedrossian, "Steering Law Design for Redundant Single Gimbaled Control Moment Gyro Systems," 8/87 (MIT Mechanical Engineering).

S.M. Theses

As Reader:

Luke Vink, 'Materiality in 'Suspense'', 8/16 (MAS).

Tal Achituv, "Assisted Self-Expression in Paint," 5/16 (MAS).

Sarah Platte, "The Maestro Myth – Exploring the Impact of Conducting Gestures on the Musician's Body and the Sounding Result," 5/16 (MAS).

Cameron Taylor, "Transverse Flux Motor Optimization for Utilization in Bionic Joints," 5/16 (MAS).

Jean-Francois Duval, "Flexible and Scalable Electronics Architecture for Prosthetic and Robotic Applications," 5/15 (MAS).

Guy Satat, "Imaging Through Scattering," 5/15 (MAS).

Tome Basheer, "Hooke: Elastic Interfaces Through Computationally Augmented Contraction, Dilation, and Distortion," 5/15 (MAS).

Felix Heibeck, "MetaMorph: A Thin-Film Composite with Dynamic Material Properties," 5/15 (MAS).

Charles Holbrow, "Hypercompression," 5/15 (MAS).

Daniel Goodman, "SurfaceSense: An Architecture for Distributed, Large-Scale Sensing of Surfaces," 5/15 (MAS).

Kamal Farah, "Soft Exchange: Interaction Design with Biological Interfaces," 5/15 (MAS).

Benjamin A. Bloomberg, Hyperproduction: An Audio-Centric Framework For The Abstract Modeling Of Live Performance To Guide Audience Attention And Perspective Using Connected Real-Time Systems," 8/14 (MAS).

William K. Langford, "Electronic Digital Materials," 9/14 (MAS).

Jared Laucks, "Custom Mechanisms for Tunable Material Deposition," 6/14 (MAS).

Robert Michael Hemsley, "Flow: A Framework for Reality-Based Interfaces," 2/14 (MAS).

Kshitij Marwah, "Tensor Photography: Exploring Space of 4D Modulations Inside Traditional Camera Designs," 9/13 (MAS).

Samuel Jacoby, "Drawing the Electric," 6/13 (MAS).

Praveen Subramani, "taking charge: Optimizing Urban Charging Infrastructure for Shared Electric Vehicles," 9/12 (MAS).

Akito van Troyer, "Hyperaudience Designing Performance Systems for Audience Inclusion," 8/12 (MAS).

David Cranor, "A System For Prototyping Ubiquitous Computing Environments Mediated By Touch," 9/11 (MAS).

Matthew Donahoe, "OnTheRun: A Location-based Exercise Game," 9/11 (MAS).

Roarke Horstmeyer, "Towards a Unified Treatment of 3D Display using Partially Coherent Light," 9/11 (MAS).

Jinha Lee, "ZeroN: Mid-Air Tangible Interaction Enabled by Computer Controlled Magnetic Levitation," 2/11 (MAS).

Natan Linder, "LuminAR: A Compact and Kinetic Projected Augmented Reality Interface," 9/11 (MAS).

David Y. Robert, "Imaginative Play with Blended Reality Characters," 6/11 (MAS).

Edward (Ned) E. Burns, "End-User Modification and Correction of Home Activity Recognition," 9/10 (MIT Architecture Dept.).

Andrea Colaço, "Back Talk: An Auditory Environment for Remote Co-Presence in Television Viewing," 9/10 (MAS).

Andrew A. Cavatora, "Nervebox: The First General Platform for Electromechanical Musical Instruments," 6/10 (MAS).

Noah Feehan, "Syncwalk - A Framework for Geospatial Audio Composition," 6/10 (MAS).

Elly N. Jessop, "A Gestural Media Framework: Tools for Expressive Gesture Recognition and Mapping in Rehearsal and Performance," 6/10 (MAS).

Sigurdur Adalgeirsson, "MeBot: A Robotic Platform for Socially Embodied Telepresence," 9/09 (MAS).

Matthew W. Hirsch, "BiDi Screen: Depth and Lighting Aware Interactive Display," 9/09 (MAS).

Ana Luisa Santos, "uCom: Spatial Displays for Visual Awareness of Remote Locations," 9/09 (MAS).

Amit Zoran, "Chameleon Guitar: Physical Heart in a Digital Instrument," 6/09 (MAS).

Matthew T. Farrell, "Chameleon Guitar: Physical Heart in a Digital Instrument," 6/09 (MAS).

Jun K. Lee, "Affordable Avatar Control System for Personal Robots," 2/09 (MAS).

Sanghoon Lee, "Infofield: An Aura Recognizing Digital Information of Everyday Environments," 2/09 (MAS).

Marcelo Coelho, "Materials of Interaction," 9/08 (MAS).

Brandon T. Taylor, "Graspables: Grasp Recognition as a User Interface," 9/08 (MAS).

Avrum Douglas Hollinger, "Design of fMRI-Compatible Electronic Musical Interfaces," 9/08, (McGill University, Department of Music).

Benjamin Aisen, "An Inertial Measurement-Based Gait Detection System for Active Leg Prostheses," 9/07 (MAS).

Steven Pliam, "The Chandelier: Toward a Digitally Conceived Physical Performance Object," 9/07 (MAS).

Daniel O. Olguin, "Sociometric Badges: Wearable Technology for Measuring Human Behavior," 6/07 (MAS).

Michael A. Fabio, "The Chandelier: An Exploration in Robotic Musical Instrument Design," 6/07 (MAS).

Patrik Künzler, "Humanseat: semi-wearable seating concepts for vehicle control, medical, and wellbeing applications," 6/07 (MAS).

Wen Dong, "Influence Modeling of Complex Stochastic Processes," 9/06 (MAS).

Bo Morgan, "Learning Commonsense Human-language Descriptions from Temporal and Spatial Sensor-network Data," 9/06 (MAS).

Enrico Costanza, "Subtle, Intimate Interfaces for Mobile Human Computer Interaction," 9/06 (MAS).

Ernesto Carlos Martinez Villalpando, "Estimation of Ground Reaction Force and Zero Moment Point on a Powered Ankle-Foot Prosthesis," 9/06 (MAS).

Sajid H. Sadi, "subTextile: A Construction Kit for Behavioral Textiles," 9/06 (MAS).

Gauri Nanda, "Accessorizing with Networks: The Possibilities of Building with Computational Textiles," 9/05 (MAS)

David Sachs, "A Forearm Controller and Tactile Display," 9/05 (MAS).

John Harrison, "SoundBlocks and SoundScratch: Tangible and Virtual Digital Sound Programming and Manipulation for Children," 9/05 (MAS).

Walter Daniel Stiehl, "Sensitive Skins and Somatic Processing for Affective and Sociable Robots based upon a Somatic Alphabet Approach," 5/05 (MAS).

Gian Pangaro, "The Actuated Workbench," 6/03 (MAS).

Simon Greenwold, "Spatial Computing," 5/03 (MAS).

Emmanuel Munguia Tapia, "Activity Recognition in the Home Setting Using Simple and Ubiquitous Sensors," 9/03 (MAS).

Megan Galbriath, "Embedded Systems for Computational Garment Design," 6/03 (MAS).

Parul Vora, "SIMULACRUM: Situated Memory for Architectural Space." 8/03 (MAS).

Deva Seetharamakrishnan, "C@T – A Language for Programming Massively Distributed Systems," 9/02 (MAS).

Nikita Pashenkov, "Optical Turntable as an Interface for Musical Performance," 5/02 (MAS).

Jorge Martinez Arazia, "Wireless transmission of power for sensors in context aware spaces," 6/02 (MAS).

Joshua Weaver, "A wearable health monitor to aid Parkinson Disease treatment," 6/03 (MAS).

Akshay Mohan, "Health Technology: Design of Bandage-Sized Wireless Sensors and Effect of Ambient Displays on Social Support and Diabetes Management," 9/04 (MAS).

Ricardo Garcia, "Automatic Generation of Sound Synthesis Techniques," 9/01 (MAS).

Diana Young, "New Frontiers of Expression Through Real-Time Dynamics Measurement of Violin Bows," 9/01 (MAS).

Tristan Jehan, "Perceptual Synthesis Engine: An Audio-Driven Timbre Generator," 9/01.

Wei Chai, "Melody Retrieval on the Web," 9/01 (MAS).

Wendy G. Ju, "The Design of Active Workspaces," 9/01 (MAS).

Jay-Chol Lee, "HandSCAPE: A Design of a Computational Measuring System," 6/01 (MAS).

Daniel J. Overhault, "The Emonator: A Novel Musical Interface," 9/00 (MAS).

Edward V. Hammond, "Multi-Modal-Mixing," 6/00 (MAS).

Matthew V. Lau. "The Snap! Toolkit: A Model for Pluggable Monitoring," 6/00 (MAS).

Craig A. Wizneski, "The Design of Personal Ambient Displays," 6/99 (MAS).

Tom White, "Introducing Liquid Haptics in High Bandwidth Human Computer Interface," 1/98 (MAS).

Andrew Choon-ki Hong, "Non-Linear Analysis of Cello Pitch and Timbre," 9/92 (MAS).

Doctoral Theses

As Advisor:

Jie Qi, "Paper Curiosities: Circuits on Paper for Learning and Self-Expression." 8/16 (MAS)

Nan-Wei Gong, "Design and Applications of Inkjet-Printed Flexible Sensate Surfaces," 8/13 (MAS).

Michael T. Lapinski, "A Platform for High-Speed Biomechanical Data Analysis using Wearable Wireless Sensors," 8/13 (MAS).

Amit Zoran, "Hybrid re-Assemblage: Bridging Traditional Craft and Digital Design," 8/13 (MAS).

Bo Morgan, "A Substrate for Accountable Layered Systems," 8/13 (MAS).

Mathew Laibowitz, "Creating Cohesive Video with the Narrative-Informed use of Ubiquitous Wearable and Imaging Sensor Networks," 1/10 (MAS).

Mark C. Feldmeier, "Personalized Building Comfort Control," 9/09 (MAS).

Joshua H. Lifton, "Dual Reality: An Emerging Medium," 9/07 (MAS).

Ari Y. Benbasat, "Techniques for Real-time Adaptive Low-Power Sensor Systems," February 2007 (MAS).

Stacy J Morris, "A Shoe-Integrated Sensor System for Wireless Gait Analysis and Real-Time Therapeutic Feedback," June 2004 (MIT Mechanical Engineering - HST).

John Edward Dzielski, "A Feedback Linearization Approach to Spacecraft Control Using Momentum Exchange Devices," April 1988 (MIT Mechanical Engineering).

Doctoral Theses

As Reader:

Natan Linder "Rapid Development and Real World Deployments of Projected Augmented Reality Applications," (MAS) expected 12/16.

Jacob Bernstein, "Scalable Neural Recording: Electrophysiology System Development and Validation," (MAS) 8/16.

Clément Duhart, "Toward Organic Ambient Intelligences – EMMA," 6/16, Normandie Université (l'Université du Havre), France.

Roy Shilkrot, "Smart Fingers: Devices for Assistive Pointing Augmentation," 6/15 (MAS).

Sean Follmer, "Dynamic Physical Affordances for Shape Changing and Deformable User Interfaces," 1/15 (MAS).

Santiago E.A. Bernate, "Digital Synesthesia: Using Mobile Technology to Interact With Our World," 1/15 (MAS).

Andrea Colaço, "Compact and Low-Power Computational 3D Sensors for Gestural Input," 6/14 (MAS).

Andrew O. Payne, "Personalized Intelligent Comfort Control for Office Spaces," 5/14 (Harvard Graduate School of Design).

Wu-Hsi Li, "Loco-Radio - Designing High-Density Augmented Reality Audio Browsers," 2/14 (MAS).

Matthew T. Farrell, "Pattern Classification of Terrain During Amputee Walking," 5/13 (MAS).

Noah Vawter, "Exertion Instruments," 6/11 (MAS).

Fulu Li, "Community Computation," 6/09 (MAS).

David J. Merrill, "Interaction with Embodied Media," 6/09.

Emmanuel Munguia Tapia, "Using Machine Learning for Real-Time Activity Recognition and Estimation of Energy Expenditure," 6/08 (MAS).

Eric Wade, "Analysis and Design of a Wearable Health-Monitoring Network using DC Powerline Communication and Conductive Textiles," 1/07 (MIT Mechanical Engineering Department).

Diana Young, "A System for Understanding Violin Bowing Technique Through Measurement of Physical Dynamics", 1/07 (MAS).

Roberto Aimi, "Not another controller: hybrid percussion instruments using real acoustic systems to drive digital ones," 10/06 (MAS).

Dean Christakos, "Distributed-in/Distribution-out Sensor Networks: A New Framework to Analyze Distributed Phenomena," 2/06 (MAS)

Ali Mazalek, "Media Tables: An extensible method for developing multi-user media interaction platforms for shared spaces," 9/05 (MAS).

Aggelos Bletsas, "Intelligent Antenna Sharing in Cooperative Diversity Wireless Networks," 6/05 (MAS).

Susan Baldwin, "Development of Low Cost, Low Power Optical Sensing Devices Based on Coupled LED's for Colorimetric Analysis," 6/05 (Chemistry Dept., Dublin City University).

Kynan Eng, "Designing Neuromorphic Interactive Spaces, 6/04 (ETH Zurich, EE Dept.).

Gili Weinburg, "Interconnected Musical Networks - Bringing Expression and Thoughtfulness to Collaborative Group Playing," 8/03 (MAS).

Ernest Rehmi Post, "Inertial Measurement via Dynamics of Trapped Particles," 8/03 (MAS).

Dorothy Shamonsky, "The Mixing of Two Worlds -- Smart Clay -- Using Ubiquitous Computing to Add Intelligence to a Physical Medium," 6/03 (MIT Architecture)

Mathew Reynolds, "Low-Frequency Indoor Radiolocation," February 2/03 (MAS).

Brian Clarkson, "Life Patterns: structure from wearable sensors," 9/02 (MAS).

Gregory Errol Chamitoff, "Robust Intelligent Flight Control for Hypersonic Vehicles," 2/92 (MIT Aero/Astro)