Committee on Energy and Commerce
U.S. House of Representatives
Witness Disclosure Requirement - "Truth in Testimony"
Required by House Rule XI, Clause 2(g)

1. Your Name:	**Kevin Fu**

		Yes	No
2.	Are you testifying on behalf of the Federal, or a State or local government entity?		X
3.	Are you testifying on behalf of an entity that is not a government entity?		X

4. Other than yourself, please list which entity or entities you are representing:

None

5. Please list any Federal grants or contracts (including subgrants or subcontracts) that <u>you or the entity you represent have received</u> on or after October 1, 2009:

See attachment

6. If your answer to the question in item 3 in this form is "yes," please describe your position or representational capacity with the entity or entities you are representing:

		Yes	No
7.	If your answer to the question in item 3 is "yes," do any of the entities disclosed in item 4 have parent organizations, subsidiaries, or partnerships that you are not representing in your testimony?		

8. If the answer to the question in item 3 is "yes," please list any Federal grants or contracts (including subgrants or subcontracts) that were received by the entities listed under the question in item 4 on or after October 1, 2009, that exceed 10 percent of the revenue of the entities in the year received, including the source and amount of each grant or contract to be listed:

9. Please attach your curriculum vitae to your completed disclosure form.

Signature:█████████████████   Date: 11/24/2012

Kevin Fu

Department of Electrical Engineering and Computer Science
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University of Michigan
Computer Science and Engineering
Beyster Building Room 4628
2260 Hayward Street
Ann Arbor, MI 48109-2121

Research areas	Trustworthy computing and low-power embedded systems, including systems security, medical devices, health IT, RFID-scale computation, and energy-aware architectures.

Education

Massachusetts Institute of Technology   Cambridge, MA
PhD in Electrical Engineering and Computer Science, *2005*.
Thesis: Integrity and access control in untrusted content distribution networks
Advisors: Frans Kaashoek and Ron Rivest

Massachusetts Institute of Technology   Cambridge, MA
MEng in Electrical Engineering and Computer Science, *1999*.
Thesis: Group sharing and random access in cryptographic storage file systems
Advisor: Ron Rivest

Massachusetts Institute of Technology   Cambridge, MA
SB in Computer Science and Engineering, *1998*.

Academic positions

Electrical Engineering & Computer Science, Univ. Michigan   Ann Arbor, MI
Associate professor w/ tenure, *2013–*.

Department of Computer Science, UMass Amherst   Amherst, MA
Associate professor w/ tenure, *2011–2012*.
Assistant professor, *2005–2011*.
Research scientist, *Summer 2005*.

Awards, honors

ACM SIGCOMM Best Paper Award
"They Can Hear Your Heartbeats: Non-Invasive Security for Implanted Medical Devices"
at ACM SIGCOMM. 223 submissions. 14% acceptance. *August 2011*.

UMass Commercial Ventures & Intellectual Property
Technology Development Fund Award
Award for low-power "SMASH Memory." *March 2011*.

Association of Computing Machinery (ACM) Senior Member
The Senior Member Grade recognizes those ACM members with at least 10 years of
professional experience and 5 years of continuous Professional Membership who have
demonstrated performance that sets them apart from their peers. *February 2011*.

Armstrong Fund for Science, UMass Amherst
John and Elizabeth Armstrong established the Armstrong Fund for Science to recognize
researchers with aggressive research visions. *May 2010*.

Alfred P. Sloan Research Fellowship
2009. `http://www.sloan.org/sloan-research-fellowships/`

MIT Technology Review TR35
Innovator of the Year. TR35 list recognizes 35 outstanding innovators under the age of 35 each year. The awards span a wide range of fields, including medicine, computing, communications, electronics, and nanotechnology. *September 2009.*
`http://www.technologyreview.com/TR35/index.aspx?year=2009`

NSF CAREER Award
The Faculty Early Career Development (CAREER) Program. *2009.*

IEEE Security & Privacy (Oakland) Outstanding Paper Award
"Pacemakers and Implantable Cardiac Defibrillators: Software Radio Attacks and Zero-Power Defenses" at the IEEE Symposium on Security & Privacy. 249 submissions. 11.2% acceptance. *May 2008.*

UMass Commercial Ventures & Intellectual Property
Technology Development Fund Award
Award for "Zero-Power Telemetry for Implantable Medical Devices." *March 2008.*

Intel Foundation PhD Fellowship Award
Intel Fellows recommend the candidates for this award, which provides a year of support and an opportunity to conduct research at Intel. *June 2004.*

10th USENIX Security Symposium Best Student Paper Award
"Dos and Don'ts of Client Authentication on the Web." *August 2001.*

ACM International Student Research Contest, First Place Graduate Award
Award for a poster and presentation on the SFS Read-Only File System. *February 2001.*

AT&T Student Research Day
Third place graduate award for a poster on the SFS Read-Only File System. *October 2000.*

USENIX Scholar
The USENIX Scholars Fellowship provides a year of funding to students with exceptional research ability and promise. *January 2000.*

Research experience	**U.S. Food and Drug Administration (FDA)** Silver Spring, MD Visiting scientist and consultant, Center for Devices and Radiological Health, *2011*. ORISE fellowship for FDA's Network of Experts, *2012–*.

U.S. Food and Drug Administration (FDA)   Silver Spring, MD
Visiting scientist and consultant, Center for Devices and Radiological Health, *2011*.
ORISE fellowship for FDA's Network of Experts, *2012–*.

MIT Computer Science and AI Lab   Cambridge, MA
Visiting scientist. *2011–2012*.

Beth Israel Deaconess Medical Center, Harvard Medical School   Boston, MA
Visiting scientist. Cardiovascular Division. *2009–2012*.

Microsoft Research   Redmond, WA
Visiting researcher. Extreme Computing Group. *July 2009, July 2010*.

Johns Hopkins Information Security Institute   Baltimore, MD
Visiting scholar for secure file systems, proxy re-encryption, and RFID security & privacy. *2003–2005*.

MIT Parallel and Distributed Operating Systems Group   Cambridge, MA
Research assistant in secure file systems and Web authentication at the MIT Lab for Computer Science. *1998–2005*.

Hewlett-Packard Labs   Palo Alto, CA
Internship in cryptographic key regression for secure storage. *Summer 2002*.

MIT Applied Security Reading Group   Cambridge, MA
Founded the Applied Security Reading Group at the MIT Lab for Computer Science. Conducted 50 seminars for students, faculty, staff, and guests from industry. The seminar included several invited talks from leading experts in security. *1999–2003*.

Bellcore (Telcordia) — Security Research Group   Morristown, NJ
Internship in home automation, secure email revocation, a fast stream cipher for video, and approximate message authentication codes for watermarking images. *Summers 1996– 1998 and Fall 1998*.

MIT Media Lab, Gesture and Narrative Language   Cambridge, MA
Undergraduate researcher on Renga, a system for children around the world to write a story collaboratively in real time. *Fall 1995*.

Industrial experience

Sightpath/Cisco Systems   Waltham/Boxborough, MA
Software engineer for security issues. *1999–2002*.

MIT Information Systems – Network Security Team   Cambridge, MA
Technical support. Responded to intrusions, tracked down computer crackers, reverse engineered encrypted exploits, encouraged the use of secure communication, and assisted law enforcement. *1994–2002*.

Holland Community Hospital   Holland, MI
Technical support. Rollout of a paperless medical record system. *1993–1996*.

Refereed journal publications

[J1] "Security and Privacy Qualities of Medical Devices: An Analysis of FDA Postmarket Surveillance" by Daniel B. Kramer, Matthew Baker, Benjamin Ransford, Andres Molina-Markham, Quinn Stewart, Kevin Fu, Matthew R. Reynolds. In *PLoS ONE*, 7(7), 7 pages, July 2012.

[J2] "Half-Wits: Software Techniques for Low-Voltage Probabilistic Storage on Microcontrollers with NOR Flash Memory" by Mastooreh Salajegheh, Yue Wang, Anxiao (Andrew) Jiang, Erik Learned-Miller, Kevin Fu. To appear in *ACM Transactions on Embedded Computing Systems, Special Issue on Probabilistic Embedded Computing*, 2012.

[J3] "Clinically Significant Magnetic Interference of Implanted Cardiac Devices by Portable Headphones" by Sinjin Lee, Kevin Fu, Tadayoshi Kohno, Benjamin Ransford, William H. Maisel. In *Heart Rhythm Journal*, 6(10), pp. 1432–1436. October 2009.

[J4] "Power-up SRAM State as an Identifying Fingerprint and Source of True Random Numbers" by Daniel Holcomb, Wayne Burleson, Kevin Fu. In *IEEE Transactions on Computers*, 58(9):1198–1210, September 2009 (earlier version in RFIDSec 2007).

[J5] "Electromagnetic Interference (EMI) of Implanted Cardiac Devices by MP3 Player Headphones" by Sinjin Lee, Benjamin Ransford, Kevin Fu, Tadayoshi Kohno, William H. Maisel. In *Circulation*, 118(18 Supplement), 1 page, November 2008. Abstract 662, 2008 American Heart Association Annual Scientific Sessions.

[J6] "Security and Privacy for Implantable Medical Devices" by Daniel Halperin, Thomas S. Heydt-Benjamin, Kevin Fu, Tadayoshi Kohno, William H. Maisel. In *IEEE Pervasive Computing, Special Issue on Implantable Electronics*, 7(1):30–39, January–March, 2008.

[J7] "Improved Proxy Re-encryption Schemes with Applications to Secure Distributed Storage" by Giuseppe Ateniese, Kevin Fu, Matthew Green, Susan Hohenberger. In *ACM Transactions on Information and System Security (TISSEC)*, 9(1):1–30, February 2006 (earlier version in NDSS 2005).

[J8] "Fast and Secure Distributed Read-Only File System" by Kevin Fu, M. Frans Kaashoek, David Maziéres. In *ACM Transactions on Computer Systems*, 20(1):1-24, February 2002 (fast tracked by OSDI program committee, earlier version in OSDI 2000).

Refereed conference publications

[C1] "TARDIS: Time and Remanence Decay in SRAM to Implement Secure Protocols on Embedded Devices without Clocks" by Amir Rahmati, Mastooreh Salajegheh, Dan Holcomb, Jacob Sorber, Wayne Burleson, Kevin Fu. In *Proceedings of the 21st USENIX Security Symposium*, August 2012. (acceptance rate = 43/222 = 19%)

[C2] "Designing Privacy-preserving Smart Meters with Low-Cost Microcontrollers" by Andres Molina-Markham, George Danezis, Kevin Fu, Prashant Shenoy, David Irwin. In *Proceedings of the 16th International Conference on Financial Cryptography and Data Security*, February 2012 (acceptance rate = 23/88 = 26%).

[C3] "They Can Hear Your Heartbeats: Non-Invasive Security for Implanted Medical Devices" by Shyamnath Gollakota, Haitham Hassanieh, Benjamin Ransford, Dina Katabi, Kevin Fu. In *Proceedings of ACM SIGCOMM*, 12 pages, August 2011 (**Best Paper Award**, acceptance=32/223=14%).

[C4] "Mementos: System Support for Long-Running Computation on RFID-Scale Devices" by Benjamin Ransford, Jacob Sorber, Kevin Fu. In *Proceedings of 16th Architectural Support for Programming Languages and Operating Systems (ASPLOS 2011)*, 12 pages, March 2011 (acceptance=32/152=21%).

[C5] "Exploiting Half-Wits: Smarter Storage for Low-Power Devices" by Mastooreh Salajegheh, Yue Wang, Kevin Fu, Anxiao (Andrew) Jiang, Erik Learned-Miller. In *Proceedings of the 9th USENIX Conference on File and Storage Technologies (FAST '11)*, 14 pages, February 2011 (acceptance=20/74=27%).

[C6] "On the Limits of Effective Micro-Energy Harvesting on Mobile CRFID Sensors" by Jeremy Gummeson, Shane S. Clark, Kevin Fu, Deepak Ganesan. In *Proceedings of 8th*

Annual ACM/USENIX International Conference on Mobile Systems, Applications, and Services (MobiSys 2010), pp. 195–208, June 2010 (acceptance=25/124=20%).

[C7]   "CCCP: Secure Remote Storage for Computational RFIDs" by Mastooreh Salajegheh, Shane Clark, Benjamin Ransford, Kevin Fu, Ari Juels. In *Proceedings of the 18th USENIX Security Symposium*, pp. 215–230, August 2009 (acceptance=26/176=15%).

[C8]   "Pacemakers and Implantable Cardiac Defibrillators: Software Radio Attacks and Zero-Power Defenses" by Daniel Halperin, Thomas S. Heydt-Benjamin, Benjamin Ransford, Shane S. Clark, Benessa Defend, Will Morgan, Kevin Fu, Tadayoshi Kohno, William H. Maisel. In *Proceedings of the 29th IEEE Symposium on Security and Privacy*, pp. 129–142, May 2008 (**Outstanding Paper Award**, acceptance=28/249=11.2%).

[C9]   "Maximalist Cryptography and Computation on the WISP UHF RFID Tag" by Hee-Jin Chae, Daniel J. Yeager, Joshua R. Smith, Kevin Fu. In *Proceedings of the Conference on RFID Security*, 12 pages, July 2007 (acceptance=13/26=50%).

[C10]   "Initial SRAM State as a Fingerprint and Source of True Random Numbers for RFID Tags" by Daniel E. Holcomb, Wayne P. Burleson, Kevin Fu. In *Proceedings of the Conference on RFID Security*, 12 pages, July 2007 (acceptance=13/26=50%).

[C11]   "Vulnerabilities in First-Generation RFID-Enabled Credit Cards" by Thomas S. Heydt-Benjamin, Daniel V. Bailey, Kevin Fu, Ari Juels, Tom O'Hare. In the *Proceedings of 11th International Conference on Financial Cryptography and Data Security*, Lecture Notes in Computer Science, Vol. 4886, pp. 2–14, February 2007 (acceptance=17/84=20%, extended version UMass Amherst Tech Report 06-055, October 2006).

[C12]   "Key Regression: Enabling Efficient Key Distribution for Secure Distributed Storage" by Kevin Fu, Seny Kamara, Tadayoshi Kohno. In *Proceedings of the 13th Annual Network and Distributed System Security Symposium (NDSS)*, 20 pages, February 2006 (acceptance=13.6%).

[C13]   "Improved Proxy Re-encryption Schemes with Applications to Secure Distributed Storage" by Giuseppe Ateniese, Kevin Fu, Matthew Green, Susan Hohenberger. In *Proceedings of the 12th Annual Network and Distributed System Security Symposium (NDSS)*, 15 pages, February 2005 (acceptance=16/124=12.9%, extended version in ACM TISSEC).

[C14]   "REX: Secure, Extensible Remote Execution" by Michael Kaminsky, Eric Peterson, Daniel B. Giffin, Kevin Fu, David Maziéres, M. Frans Kaashoek. In *Proceedings of the 2004 USENIX Annual Technical Conference (USENIX)*, pp. 199–212, June 2004 (acceptance=21/164=13%).

[C15]   "Plutus: Scalable Secure File Sharing on Untrusted Storage" by Mahesh Kallahalla, Erik Riedel, Ram Swaminathan, Qian Wang, Kevin Fu. In *Proceedings of the 2nd USENIX Conference on File and Storage Technologies (FAST)*, pp. 29–42, March 2003 (acceptance=18/67=27%).

[C16]   "Dos and Don'ts of Client Authentication on the Web" by Kevin Fu, Emil Sit, Kendra Smith, and Nick Feamster. In *Proceedings of the 10th USENIX Security Sym-*

posium, pp. 251–268, August 2001 (**Best Student Paper Award**, acceptance=28.9%, extended version MIT-LCS Tech Report #818).

[C17] "Fast and Secure Distributed Read-Only File System" by Kevin Fu, M. Frans Kaashoek, David Maziées. In the *Proceedings of the 4th USENIX Symposium on Operating Systems Design and Implementation (OSDI 2000)*, October 2000 (acceptance=24/111=21.6%).

[C18] "Revocation of Unread Email in an Untrusted Network" by Avi Rubin, Dan Boneh, Kevin Fu. In *Proceedings of the Australasian Conference on Information Security and Privacy*, Springer-Verlag, Lecture Notes in Computer Science, Vol. 1270, pp. 62–75. July 1997.

Refereed workshop publications

[W1] "Potentia est Scientia: Security and Privacy Implications of Energy-Proportional Computing" by Shane S. Clark, Benjamin Ransford, Kevin Fu. In *Proceedings of the 7th USENIX Workshop on Hot Topics in Security (HotSec '12)*. 6 pages, August 2012.

[W2] "DRV-Fingerprinting: Using Data Retention Voltage of SRAM Cells for Chip Identification" by Dan Holcomb, Amir Rahmati, Mastooreh Salajegheh, Wayne P. Burleson, Kevin Fu. In *8th Workshop on RFID Security and Privacy (RFIDSec '12)*. Nijmegen, The Netherlands, 15 pages, July 2012.

[W3] "Ekho: Bridging the Gap Between Simulation and Reality in Tiny Energy-Harvesting Sensors" by Hong Zhang, Mastooreh Salajegheh, Kevin Fu, Jacob Sorber. In *Workshop on Power Aware Computing and Systems (HotPower 2011)*, 5 pages, October 2011.

[W4] "Take Two Software Updates and See Me in the Morning: The Case for Software Security Evaluations of Medical Devices" by Steve Hanna, Rolf Rolles, Andres Molina-Markham, Pongsin Poosankam, Kevin Fu, Dawn Song. In *Proceedings of 2nd USENIX Workshop on Health Security and Privacy (HealthSec)*, 5 pages, August 2011 (acceptance=13/38=34%).

[W5] "Private Memoirs of a Smart Meter" by Andres Molina-Markham, Prashant Shenoy, Kevin Fu, Emmanuel Cecchet, David Irwin. In *2nd ACM Workshop on Embedded Sensing Systems for Energy-Efficiency in Buildings (BuildSys)*, Zurich, Switzerland, 6 pages, November 2010, in conjunction with ACM SenSys 2010 (acceptance=14/40=35%).

[W6] "HICCUPS: Health Information Collaborative Collection Using Privacy and Security" by Andres Molina, Mastooreh Salajegheh, Kevin Fu. In *ACM Workshop on Security and Privacy in Medical and Home-Care Systems (SPIMACS)*, pp. 21–30, November 2009.

[W7] "Towards Autonomously-Powered CRFIDs" by Shane S. Clark, Jeremy Gummeson, Kevin Fu, Deepak Ganesan. In *Workshop on Power Aware Computing and Systems (HotPower 2009)*, 5 pages, October 2009.

[W8] "Getting Things Done on Computational RFIDs with Energy-Aware Checkpointing and Voltage-Aware Scheduling" by Benjamin Ransford, Shane Clark, Mastooreh Salajegheh, Kevin Fu. In *USENIX Workshop on Power Aware Computing and Systems (HotPower 2008)*, 6 pages, December 2008.

[W9] "Absence Makes the Heart Grow Fonder: New Directions for Implantable Medical Device Security" by Tamara Denning, Kevin Fu, Tadayoshi Kohno. In *USENIX Hot Topics in Security Workshop (HotSec)*, 7 pages, July 2008, (acceptance=32%).

[W10] "Cryptanalysis of Two Lightweight RFID Authentication Schemes" by Benessa Defend, Kevin Fu, Ari Juels. In *Proceedings of Fourth IEEE International Workshop on Pervasive Computing and Communication Security (PerSec) Workshop*, 5 pages, March 2007 (acceptance=29%).

[W11] "Secure Software Updates: Disappointments and New Challenges" by Anthony Bellissimo, John Burgess, Kevin Fu. In *USENIX Hot Topics in Security Workshop (HotSec)*, 7 pages, July 2006 (acceptance=19.6%).

[W12] "Privacy for Public Transportation" by Thomas S. Heydt-Benjamin, Hee-Jin Chae, Benessa Defend, Kevin Fu. In *6th Workshop on Privacy Enhancing Technologies (PET)*, Lecture Notes in Computer Science, Vol. 4258, pp. 1–19, June 2006 (acceptance=26%).

Book chapter

[B1] "Maximalist Cryptography and Computation on the WISP UHF RFID Tag" by Hee-Jin Chae, Mastooreh Salajegheh, Daniel J. Yeager, Joshua R. Smith, Kevin Fu. Book chapter in *Wirelessly powered sensor networks and computational RFID*, Joshua R. Smith (ed.), 12 pages, to appear (earlier version in RFIDSec 2007).

Invited papers

[Col1] "Design Challenges for Secure Implantable Medical Devices" by Wayne P. Burleson, Shane S. Clark, Benjamin Ransford, Kevin Fu. In *Proceedings of the 49th Design Automation Conference (DAC '12)*, 6 pages, June 2012.

[Col2] "Inside Risks, Reducing Risks of Implantable Medical Devices: A Prescription to Improve Security and Privacy of Pervasive Health Care" by Kevin Fu. Inside Risks Column in *Communications of the ACM (CACM)* 52(6), June 2009.

[Col3] "Using SFS for a Secure Network File System" by Kevin Fu, Michael Kaminsky, and David Maziéres. In *;login: The USENIX Magazine*, December 2002.

[Col4] "Web Cookies: Not Just a Privacy Risk" by Emil Sit and Kevin Fu. Inside Risks Column in *Communications of the ACM (CACM)* 44(9):120, September 2001.

Commissioned paper

[Com1] "Trustworthy Medical Device Software" by Kevin Fu. In *Public Health Effectiveness of the FDA 510(k) Clearance Process*, IOM (Institute of Medicine), National Academies Press, Washington, DC, 2011.

Unrefereed articles, demos, and posters

[U1] "Current Events: Identifying Webpages by Tapping the Electrical Outlet" by Shane S. Clark, Benjamin Ransford, Jacob Sorber, Wenyuan Xu, Erik Learned-Miller, Kevin Fu. Tech report UM-CS-2011-030, Department of Computer Science, University of Massachusetts Amherst. Amherst, MA, July 2012.

[U2] "Recent Results in Computer Security for Medical Devices" by Shane S. Clark, Kevin Fu. In *International ICST Conference on Wireless Mobile Communication and*

Healthcare (MobiHealth), Special Session on Advances in Wireless Implanted Devices. 8 pages, October 2011.

[U3] "Software issues for the medical device approval process" by Kevin Fu. Statement to the Special Committee on Aging, United States Senate, Hearing on a delicate balance: FDA and the reform of the medical device approval process, Wednesday, April 13, 2011.

[U4] "Hybrid-powered RFID sensor networks" by Shane S. Clark, Jeremy Gummeson, Kevin Fu, Deepak Ganesan. Demo at ACM SenSys 2009.

[U5] "Privacy of home telemedicine: Encryption is not enough (poster)" by Mastooreh Salajegheh, Andres Molina, Kevin Fu. Presented at *Design of Medical Devices Conference*, Minneapolis, MN, April 2009.

[U6] "Protecting Global Medical Telemetry Infrastructure" by Benessa Defend, Mastooreh Salajegheh, Kevin Fu, Sozo Inoue. Institute of Information Infrastructure Protection (I3P), Technical Report, January 2008.

[U7] "Demonstration of an RFID-enabled espresso machine" by Hee-Jin Chae, Benessa Defend, Kevin Fu. MIT RFID Academic Convocation, January 2006.

[U8] "In Memory of David Huffman." In *ACM Crossroads Magazine* 6(3), Spring 2000.

[U9] "RTLinux: An Interview with Victor Yodaiken." In *ACM Crossroads Magazine* 6(1), Fall 1999.

[U10] "Linux" (guest editor). In *ACM Crossroads Magazine* 6(1), Fall 1999.

[U11] "Group Sharing and Random Access in Cryptographic Storage File Systems." MIT MEng Thesis, May 1999.

[U12] "Approximate Message Authentication Codes" by Richard Graveman, Kevin Fu. In *Army Research Labs, Advanced Telecommunications & Information Distribution Research Program*, February 1999.

[U13] "Networks and Distributed Systems" (guest editor). In *ACM Crossroads Magazine* 5(2), Winter 1998.

Research funding

[G1] NSF Computing Systems Research "CSR: Small: Towards Autonomous, Ultra-low power RFID-Scale Sensing Systems." $490K. PI: Deepak Ganesan. CoPI: Kevin Fu. NSF CNS Award #1218586. *9/2012–8/2015*.

[G2] Microsoft Research. $7,500. PI: Kevin Fu. *4/2011–2012*.

[G3] UMass Commercial Ventures & Intellectual Property (CVIP) Technology Development Fund Award: "SMASH Memory: Smarter Storage for Low Power Devices." $25K. PI: Kevin Fu. *3/2011–3/2012*.

[G4] Armstrong Fund for Science at UMass Amherst: "Security and Privacy for Wirelessly Controlled Healthcare Technology." $20K. PI: Kevin Fu. *8/2010–7/2012*.

[G5] HHS SHARP Security: "Strategic Healthcare IT Advanced Research Projects on Security (SHARPS)." $15M ($727K UMass). Lead UIUC PI: Carl Gunter. UMass CoPI: Kevin Fu. *4/2010–2/2014.*

[G6] NSF Trustworthy Computing: "TC: Medium: Collaborative Research: Pay-as-you-Go: Security and Privacy for Integrated Transportation Payment Systems." $1,175K ($844,997 UMass). PI: Wayne Burleson. CoPIs: John Collura, Kevin Fu, Anna Lysyanskaya, Christof Paar, Marguerite Zarrillo. NSF CNS Award #0964641. *6/2010–5/2013.*

[G7] NSF Major Research Instrumentation: "MRI: Acquisition of an RFID Testbed Using Renewable Energy for Object Identification and Habitat Monitoring." $450,010. PI: Kevin Fu. CoPIs & Sr. Pers.: Charles Ross, Yanlei Diao, Deepak Ganesan, Wayne Burleson, Mark Corner, Prashant Shenoy. NSF CNS Award #0923313. *10/2009–9/2012.*

[G8] NSF Trustworthy Computing: "CAREER: Computational RFID for Securing Zero-Power Pervasive Devices." $400K. PI: Kevin Fu. NSF CNS Award #0845874. *9/2009–8/2014.*
Supplement: REU ($16K) *5/2010–8/2014.*

[G9] US Dept. of Transportation, MIT Subcontract: "Integrated Transportation Payment Systems: Principles, Concepts, and Applications" $33,914. PI: John Collura, CoPIs: Wayne Burleson, Kevin Fu. *9/2009–8/2011.*

[G10] National Security Agency/Dept. of Defense: "A Student Research Education Program in Information Command and Analysis" $100,015. PI: Brian Levine. CoPIs: Mark Corner, Kevin Fu, David Jensen, Gerome Miklau. NSA H98230-09-1-0399. *9/2009–8/2010*

[G11] Alfred P. Sloan Research Fellowship. $50K. PI: Kevin Fu. *9/2009-8/2011.*

[G12] NSF Cyber Trust: "CT-ISG: Improving Security and Privacy in Pervasive Healthcare." $449,685. PI: Kevin Fu. NSF CNS Award #0831244. *9/2008–8/2011.*
Supplement: REU ($16K) *6/2009–8/2011.*

[G13] UMass President's Science & Technology (S&T) Fund "Integrated Payment Systems: Consortium on Security and Privacy." $125K. PI: Wayne Burleson. Co-PIs: John Collura, Kevin Fu, Marguerite Zarrillo. *8/2008-7/2010.*

[G14] Institute for Information Infrastructure Protection (I3P) at Dartmouth College: "I3P Scholar Program. Research on Securing Medical Cyberinfrastructure." $90K. PI: Kevin Fu. Scholar: Shane Clark. *8/2008-8/2009.*

[G15] UMass Commercial Ventures & Intellectual Property (CVIP) Technology Development Fund Award: "Zero-Power Telemetry for Implantable Medical Devices." $30K. PI: Kevin Fu. *6/2008-5/2009.*

[G16] Institute for Information Infrastructure Protection (I3P) at Dartmouth College: "Protecting Global Medical Telemetry Infrastructure." $25K. PI: Kevin Fu. *11/2007-12/2007.*

[G17] NSF Cyber Trust: "Collaborative Research CT-ISG: New Directions and Applications of Proxy Re-cryptography." $276,142 ($62,980 UMass, $213,163 JHU). Lead JHU PI: Susan Hohenberger. JHU CoPI: Giuseppe Ateniese. UMass CoPI: Kevin Fu. NSF CNS Award #0716386. *9/2007–8/2010.*
Supplement: REU ($16K) *6/2009–8/2010.*

[G18] Gifts from RSA Labs (Security Division of EMC Corporation). $10K, *2006–2007*; $40K, *3/2008–*. PI: Kevin Fu.

[G19] Intel Research Seattle. RFID equipment donation valued at $7,600, *2007*. PI: Kevin Fu

[G20] ThingMagic. RFID equipment donation valued at $5K, *2007*. PI: Kevin Fu.

[G21] NSF Cyber Trust: "Collaborative Research CT-T: Security for Smart Tags." $1.1 million ($750K UMass, $350K JHU). Lead PI: Kevin Fu. CoPIs & Sr. Pers.: Wayne Burleson, Adam Stubblefield (JHU), Ari Juels (RSA Labs). NSF CNS Award #0627529. *9/2006–8/2010.*
Supplements: Travel for collaboration in Japan ($40K) *9/2007–8/2009*; REU ($15K) *6/2007–8/2008*; REU ($6K) *6/2008–8/2009*; Travel for collaboration in France and Switzerland ($15K) *6/2009–8/2010*; JHU Subcontract ($50K) *8/2009–7/2010.*

Invited talks and panels since 2006

[T1] Invited speaker, "Medical Device Cybersecurity: The First 164 Years."
National Science Foundation WATCH Seminar, Arlington, VA, November 2012
Medical Device Connectivity Conference, Boston, MA, October 2012

[T2] Invited speaker, "Manufacturing a Programmable RFID Sensor Device for Security Research," RFIDSec Asia, Taipei, Taiwan, November 2012.

[T3] Invited speaker, "Regulatory Responsibilities for Medical Device Security," Regulatory Affairs Professionals Society (RAPS), October 2012.

[T4] Invited speaker, "Computer Security: Microchip-Based Implants for Managing Diabetes," Joslin Diabetes+Innovation Conference, September 2012.

[T5] Invited speaker, "Medical Device System Security," American College of Clinical Engineering (ACCE) Teleconferencing Series, July 2012.

[T6] Invited panelist, "Sensors for Physical World Interfaces: Application Landscape for Future Integrated Sensors: Security and Privacy for Implantable Medical Devices," SRC/SFI/NSF Forum on Integrated Sensors for Cybersystems, Dublin, March 2012.

[T7] Keynote speaker, "The Cutting Edge of Medical Device Security and Privacy,"
14th International Symposium on Recent Advances in Intrusion Detection (RAID 2011), Menlo Park, CA, September 2011.

[T8] Invited speaker, "Trustworthy Medical Device Software."
Brown University, Providence, RI, September 2012
Emory University, Atlanta, GA, April 2012

Duke University, Durham, NC, November 2011
Johns Hopkins University Distinguished Lecture, Baltimore, MD, October 2011
Department of Homeland Security InfoSec Technology Transition Council, 2011
UC Irvine, Irvine, CA, May 2011
Williams College, Williamstown, MA, April 2011
Univ. Pennsylvania PRECISE, Philadelphia, PA, April 2011
UCSB, Distinguished Undergraduate Lecture Series, Santa Barbara, CA, April 2011
EPFL Workshop on Security/Privacy of Implantable IMDs (SPIMD), Lausanne, Switzerland, April 2011
Ruhr-Universität Bochum, Lehrstuhl Embedded Security, Bochum, Germany, March 2011
Rice University, Computer Science Colloquium, Houston, TX, October 2010
5th Workshop on Embedded Systems Security (WESS10), Scottsdale, AZ, October 2010

[T9] Distinguished Lecture, Johns Hopkins University, Computer Science, October 2011.

[T10] Invited speaker, "Your Abstractions are WorthˆHˆHˆHˆHPowerless! Non-Volatile Storage and Computation on Embedded Devices* (*Batteries Not Included)."
New York University, NY, NY, December 2011
Microsoft Research, Redmond, WA, July 2011
University of Washington, Seattle, WA, July 2011
EMC, Cambridge, MA, June 2011
Rambus, Sunnyvale, CA, May 2011

[T11] Invited speaker, "Medical Device Security and Privacy Concerns," National Institute of Standards and Technology (NIST) Information Security and Privacy Advisory Board (ISPAB), Washington, DC, July 2011.

[T12] Invited panelist, "Hackers and Attackers: How Safe is Your Embedded Design," Design Automation Conference (DAC), Embedded Systems and Software, San Diego, CA, June 2011.

[T13] Invited panelist, "Can I Hack Your Brain?" IEEE International Symposium on Hardware-Oriented Security and Trust (HOST), San Diego, CA, June 2011.

[T14] Invited panelist, CES/Amphion Forum, Las Vegas, NV, January 2011.

[T15] Invited participant, National Academy of Engineering, U.S. Frontiers of Engineering Symposium, Armonk, NY, September 2010.
http://www.naefrontiers.org/

[T16] Distinguished speaker, 2nd ACM S^3 Workshop on Wireless of the Students, by the Students, for the Students, Chicago, September 2010.

[T17] Invited speaker, "Trustworthy Medical Device Software," Institute of Medicine at the National Academies of Science panel on Public Health Effectiveness of the FDA 510(k) Clearance Process, Washington, DC, July 2010.
http://www.iom.edu/Activities/PublicHealth/510KProcess/2010-JUL-28.aspx

[T18] Invited panelist, "Reliability—How to Define Quality of Service," Joint FCC–FDA Public Meeting: Enabling the Convergence of Communications and Medical Systems, Washington, DC, July 2010.

`http://www.fda.gov/MedicalDevices/NewsEvents/WorkshopsConferences/ucm215046.htm`

[T19] Invited speaker, "Trustworthy Computing," Presidents Innovation and Technology Advisory Committee (PITAC), Washington, DC, June 2010.

`http://www.whitehouse.gov/sites/default/files/microsites/ostp/pitac-agenda-june.pdf`

[T20] Invited speaker. "Implantable Medical Devices: Security and Privacy for Pervasive, Wireless Healthcare," Dartmouth College Computer Science Colloquium, Hanover, NH, April 2010.

[T21] Invited speaker. "Implantable Medical Devices: Security and Privacy for Pervasive, Wireless Healthcare," Samsung Research, Dallas, Texas, January 2010.

[T22] Invited speaker. "Cooking Scientific Discovery," Annual Make-a-Difference Conference, Hong Kong, January 2010.

[T23] Invited speaker. "MIT Emerging Technologies Symposium (EmTech 2009)," Cambridge, September 2009.

[T24] Invited speaker. "MIT Bankcard Payment Workshop," Cambridge, MA, September 2009.

[T25] Invited speaker. "Workshop on Confidential Data Collection for Innovation Analysis in Organizations," Redmond, WA, September 2009.

[T26] Invited speaker. "Implantable Medical Devices: Security and Privacy for Pervasive Wireless Healthcare," CMU CyLab Seminar, Pittsburgh, PA, March 2009.

[T27] Invited speaker. "Security and Privacy for Wireless Implantable Devices: Pacemakers, Defibrillators, and More," CMOS Workshop, Banff, Canada, February 2009.

[T28] Invited speaker. "Energy-Aware Circuits for RFID," CMOS Workshop, Banff, Canada, February 2009.

[T29] Invited speaker. "Implantable Medical Devices: Security and Privacy for Pervasive, Wireless Healthcare," University of Massachusetts Amherst, Isenberg School of Management, The Institute for Operations Research and the Management Sciences (INFORMS) Seminar Series, December 2008.

[T30] Invited speaker. "Security Vulnerabilities in Wireless Implantable Medical Devices," Microsoft Research Redmond, September 2008.

[T31] Invited speaker. "Implantable Medical Devices: Security and Privacy for Pervasive, Wireless Healthcare," Johns Hopkins University Security Seminar Series, September 2008.

[T32] Invited speaker. "Security Vulnerabilities in Wireless Implantable Medical Devices," UMass Amherst ECE Security Seminar, September 2008.

[T33] Invited speaker. "Security Vulnerabilities in Wireless Implantable Medical Devices," Texas Instruments, September 2008.

[T34] Invited co-speaker. "New Classes of Security and Privacy Vulnerabilities for Implantable Wireless Medical Devices," Black Hat USA Briefings 2008, Las Vegas, August 2008.

[T35] Invited speaker. "Pay on the Go: Consumers & Contactless Payment" Federal Trade Commission Town Hall Meeting, Seattle, July 2008.

[T36] Invited panelist. "Is it Legal?" Panel on wireless privacy and security at the ACM/USENIX MobiSys Conference, Denver, June 2008.

[T37] Invited panelist. "RFID Security & Privacy: What's in Your Pocket?"
8th Payments Conference: Payments Fraud, Perception versus Reality hosted by the Federal Reserve Bank of Chicago, June 2008.

[T38] Invited Speaker. "Maximalist Cryptography and Computation on the WISP UHF RFID Tag," Intel Research Seattle, January 2008.

[T39] Invited Speaker. "I Can See You: RFID — The Next Generation Identity Theft Threat," 17th Annual International Fraud Investigators Conference hosted by the Toronto Police Service-Fraud Squad, December 2007.

[T40] Invited Speaker. "Security & Privacy for Pervasive Computation: RFID and Implantable Medical Devices,"
EMC Corporation Innovation Conference, Franklin, MA, October 2007.

[T41] Invited Speaker. "RFID Security and Privacy: Fundamental Lessons and Principles," 19th Workshop on Info. Sec. and Cryptography, Cheonan, Korea, September 2007; National Security Research Institute, Daejeon, Korea, September 2007;
Korea University, Division of Computer & Comm. Eng., Seoul, Korea, September 2007.

[T42] Invited Panelist. "RFID Privacy,"
MITRE Privacy Technical Exchange, Bethesda, MD, June 2007.

[T43] Invited Speaker. "Data Security Risks: RFID Lab Research,"
Boston Federal Reserve, Emerging Payments Research Group, May 2007.

[T44] Invited Panelist. "Ubiquitous Computing in the Retail Store of the Future,"
17th Annual Computers, Freedom and Privacy Conference, May 2007.

[T45] Invited Panelist and Moderator. "Wireless ID Issues: Privacy, Efficiency and Security," Dartmouth College Centers Forum on Freedom and Technology, April 2007.

[T46] Invited Speaker. "Vulnerabilities in First-Generation RFID-Enabled Credit Cards," UC Berkeley TRUST seminar, March 2007; Katholieke Universiteit (KU) Leuven Seminar, Belgium, March 2007.

[T47] Invited Panelist. "RFID: How Can Privacy and Security Be Built into the Technology," 8th Annual TACD Meeting with EC and US government officials, Brussels, Belgium, March 2007 (`http://www.tacd.org/events/meeting8/`).

[T48] Panel Moderator. "RFID Security & Privacy Panel,"
Financial Cryptography Conference, Tobago/Trinidad, February 2007.

[T49] Invited Speaker. "Computer System Security and Medical Devices,"
Food and Drug Administration (FDA), Office of Science and Engineering Laboratories, Center for Devices and Radiological Health, October 2006.

[T50] Invited Speaker. "Building RFID Applications with Security and Privacy,"
Workshop on RFID Security, Graz, Austria, July 2006.

[T51] Invited Panelist. "When Public Databases Cause Security Vulnerabilities,"
American Association for the Advancement of Science (AAAS), St. Louis, MO, February, 2006.

Professional service: leadership	**NIST Information Security and Privacy Advisory Board** Washington, DC

NIST Information Security and Privacy Advisory Board Washington, DC
The Board provides advice on information security and privacy issues pertaining to Federal Government information systems, including thorough review of proposed standards and guidelines developed by NIST. The Board reports its findings to the Secretary of Commerce, the Director of the Office of Management and Budget, the Director of the National Security Agency, and the appropriate Congressional committees.
Board Member: *October 2011–*.

ACM SIGCOMM Workshop on Medical Communication Systems Helsinki
Program Chair of MedCOMM: *August 2012*.

USENIX Health Security and Privacy Workshop (HealthSec/HealthTech)
Co-Founder. Steering Group Member: *2010–*. Co-Chair: *August 2010, August 2013*. Member: *August 2011*

RFID Security Conference/Workshop (RFIDSec) Europe
General Chair: *June 2011*. Steering Group Member: *September 2007–*.

**Workshop on Wirelessly Powered Sensor Networks
and Computational RFID (WISP Summit)** Berkeley, CA
Co-Chair: *November 2009*.

Privacy Enhancing Technologies (PET) Award Selection Committee
Selection committee, PET Outstanding Research Award. *June 2010*.

MIT TR35 Award Selection Committee
Selection committee, MIT Technology Review's TR35 awards. *April 2010*.

Institute for Information Infrastructure Protection (I3P) Hanover, NH
UMass Amherst representative: *2007–2012*.

Professional service: program committees	**USENIX Security Symposium** Member: *August 2013, August 2012, August 2007, August 2003, August 2002.*	
	Dependable Computing and Communications Symposium (DCCS) Member: *June 2012*	Boston, MA
	IEEE Symposium on Security & Privacy Member: *May 2011, May 2009, May 2008, May 2006.*	Oakland, CA
	World Wide Web Conference: Security, Privacy, Reliability and Ethics Track Member: *May 2007, May 2006, May 2003.*	
	ACM Workshop on Security and Privacy in Medical and Home-Care Systems (SPIMACS) Member: *November 2009.*	Chicago, IL
	ACM Conference on Embedded Networked Sensor Systems (SenSys) Member: *November 2009.*	Berkeley, CA
	ACM/USENIX International Conference on Mobile Systems, Applications, and Services (MobiSys) Member: *June 2009.*	Kraków, Poland
	International Conference on Financial Cryptography and Data Security Member: *January 2008.*	Cozumel, Mexico
	International Conference on Applied Cryptography and Network Security (ACNS) Member: *June 2007.*	Zhuhai, China
	Network & Distributed System Security Symposium Member: *February 2006, February 2004.*	San Diego, CA
	IEEE International Security in Storage Workshop (SISW) Member: *December 2005.*	San Francisco, CA
	The Storage Security and Survivability (StorageSS) Workshop Member: *November 2005.*	Fairfax, VA
	National Science Foundation Panelist and reviewer: *2005–.*	Arlington, VA

Patents issued	"Unidirectional Proxy Re-encryption" by Susan R. Hohenberger, Kevin Fu, Giuseppe Ateniese, Matthew Green. US patent #8,094,810. February 2006. Issued 2012.
	"Method and System for Relating Cryptographic Keys" by Kevin Fu, Mahesh Kallahalla, Ram Swaminathan. US patent #7,313,238. Hewlett-Packard Labs. Filed 2003. Issued 2007.

"Windowed Backward Key Rotation" by Kevin Fu, Mahesh Kallahalla, Ram Swaminathan. US patent #7,697,690. Hewlett-Packard Labs. Filed 2003. Issued 2010.

Patents pending
"Methods and Systems for Zero-Power Time Keeping" by Kevin Fu, Jacob Sorber, Mastooreh Salajegheh. December 2011.

"Methods and Systems for Low-Power Storage for Flash Memory" by Kevin Fu, Erik Learned-Miller, Mastooreh Salajegheh. December 2010.

Degrees conferred

Masters of Science (advisor role)
Hee-Jin Chae (2007), Benessa Defend (2008), Shane Clark (2011), Thomas S. Heydt-Benjamin (2007), Robert Lychev (2008), Benjamin Ransford (2010), Hong Zhang (2012).

PhD (advisor role)
Andres Molina-Markham (2012), Mastooreh Salajegheh (2012).

Current students

Postdoctoral research associates (supervisor role)
Denis Foo Kune, Mastooreh Salajegheh.

PhD track (advisor role)
Shane Clark (NSF Fellow), Amir Rahmati, Benjamin Ransford (NSF Fellow).

Masters track (advisor role)
Shane Guineau.

Thesis committees

Thesis committees outside CS department (member role)
Daniel Holcomb (ECE, masters 2007), Lang Lin (ECE, masters 2009), Ashwin Lakshmi-narasimhan (ECE, masters in progress), Penny Ridgdill (Math, PhD 2009), Weifeng Xu (ECE, PhD 2007), Serge Zhilyaev (ECE, masters 2010).

Thesis committees outside UMass Amherst (member role)
Shyamnath Gollakota (MIT EECS, PhD 2012).

Undergraduate research

John Brattin (CS, 2009), Shane Clark (CS, 2006-07), David Eiselen (ECE, 2007), Teresa Fiore (REU, 2011), Shane Guineau (CS, 2011), Andrew Hall (REU, 2011), Nicole Kaufman (REU, 2011), Olga Korobova (REU, 2011), Jean Fredo Louis (REU, 2008), Erin McBride (REU, 2011), William Morgan (CS, 2007), Rene Santiago (ECE, 2007), Deepti Sreepathi (microbiology, 2009), Quinn Stewart (REU, 2009-), John Tuttle (CS, 2008), Zak Wirima (REU, 2008), Vladislav Yazhbin (CS, 2009-10), Mankin Yuen (CS, 2008).

Teaching

EECS 598-008: Medical Device Security (3 credits)
Winter 2013. Instructor. Graduate-level course on methods from computer engineering, human factors, and regulatory policy to improve the information security of increasingly interconnected and wirelessly controlled medical devices.

CMP SCI 201: Architecture & Assembly Language (4 credits)
Spring 2009, 2010. Instructor. ~30 students. Introduction to the architecture and machine-level operations of modern computers at the logic, component, and system levels.

CMP SCI 466 Applied Cryptography (3 credits, previously CMP SCI 591D)
Fall 2010, Spring 2008, Spring 2007, Spring 2006. Instructor. ~20 students. Teaches upper-level undergraduates the foundations of applied cryptography and the humility of building practical systems that rely on cryptography.

CMP SCI 660: Advanced Information Assurance (3 credits)
Fall 2007, Fall 2012, instructor; Fall 2006, co-instructor. Teaches graduate students the foundational material to enter the research community of information assurance.

MIT's Network and Computer Security (6.857)
Head TA and guest lecturer (Fall 2001, Fall 2002). ~80 undergraduate/graduate students.

MIT's Computer System Engineering (6.033)
Head TA (Spring 1999), TA (Spring 1998). ~300 students.

MIT's Computer System Engineering Lab (6.906)
Lab TA (Spring 1998, Spring 1999).

CMP SCI 191A: First-Year TAP Seminar (1 credit)
Fall 2006, co-organizer. This seminar introduces first-year undergraduates to major topics in Computer Science. Each week there is a new guest lecturer.

CMP SCI 291E: RFID Electronic Identification Lab (1 credit)
Fall 2007. Instructor. My lab teaches sophomores about hands-on problem solving in the context of RFID.

CMP SCI 691I: Hot Topics in Information Security (1 credit)
Fall 2007, instructor; Fall 2005, co-instructor. This seminar covers cutting-edge papers to identify novel research problems in security.

RFID Security and Privacy Tutorial (1 day)
USENIX Security Tutorial by Kevin Fu, Ari Juels, and Adam Stubblefield. Vancouver, Canada, August 2006.

RFID Security Summer School (1 lecture)
"Special topics in RFID security," Technical University of Graz, Austria, July 2006.

MIT's Introduction to the Theory of Computation (6.840)
Grader (Fall 1998).

Departmental service
Admissions Committee, 2006–2007, 2009–2011;
Awards Committee, 2009–2010; Computing Committee, 2005–2007;
Distinguished Lecture Series (DLS)/Special Events Chair, 2008–2009;
ECE Senior Faculty Search Committee, 2008–2009;
Graduate Program Committee, 2007–2009, 2012;
Personnel Committee, 2007–2008; Recruiting Committee, 2005–2006.

Other service	**Ad hoc reviewer**
	ACM Transactions on Information and System Security (TISSEC); IEEE/ACM Transactions on Networking (TON); ACM Transactions on Sensor Networks (TOSN); ACM Transactions on Computer Systems (TOCS); NordSec; IEEE Security & Privacy Magazine; IEEE Internet Computing; International Conference on Distributed Computing Systems (ICDCS); International Workshop on Information Security Applications (WISA); USENIX Annual Technical Conference; Symposium on Operating Systems Principles (SOSP); USENIX Conference on File and Storage Technologies (FAST); International Workshop on Peer-to-Peer Systems (IPTPS); Workshop on Hot Topics in Operating Systems (HotOS); Symposium on Operating Systems Design and Implementation (OSDI).

Graduate Resident Tutor — MIT Residential Life   Burton-Conner
Live-in "life" tutor for 30 MIT undergraduates. Facilitation of conflict resolution, off-campus retreats, medical emergencies, and culinary productions. *2000–2003*.

Academic Advising — MIT Department of EECS   Cambridge, MA
Associate academic advisor to help undergraduates develop their four-year academic plans. Co-advised with Alex d'Arbeloff, MIT Chairman of the Corporation. *1999–2003*.

Association of Computing Machinery   New York, NY
General editor and contributor to the *ACM Crossroads Magazine*. *1998–2000*
(http://www.acm.org/crossroads/).

French Culinary Institute   New York, NY
Received certificate of achievement in artisanal bread making while producing the bread for the student-run L'Ecole restaurant. *June 2004*.

Selected media coverage of research

"Medical device software criticized as under-regulated" by Christine Mai-Duc. In *Los Angeles Times*, September 1, 2011.

"Headphones Can Disrupt Implanted Heart Devices" by Joseph Shapiro. In *National Public Radio, All Things Considered*, October 22, 2009.

"A Heart Device Is Found Vulnerable to Hacker Attacks" by Barnaby J. Feder. In *The New York Times*, Business Section, Mar 12, 2008.

"Heart-Device Hacking Risks Seen" by Keith J. Winstein. In *The Wall Street Journal*, March 12, 2008.

"Questions on Credit Card Safety" by John Schwartz. In *The New York Times*, Business Section, Page B1, October 23, 2006.