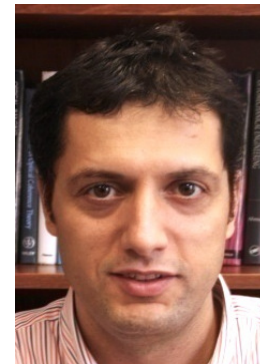


## Prof. Dr. Hakan Ürey

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 Research Group: <http://mems.ku.edu.tr>



### Professional Experience

#### Koç University, Istanbul, TURKEY

<i>Professor of Electrical Engineering</i>	2010-present
<i>Associate Professor of Electrical Engineering</i>	2007-2010
<i>Assistant Professor of Electrical Engineering</i>	2001-2007

### RESEARCH

- Established the **Optical Microsystems Laboratory (OML)** <http://mems.ku.edu.tr> specialized in design, testing, and characterization of micro-optics and MEMS. Currently OML is one of the largest groups within the Engineering faculty. OML has more than 300m2 space including 3 separate rooms for special projects and a clean room for MEMS testing.
- Established a **Class 1000 Clean Room** for micro-optics and MEMS micro-fabrication (jointly with Prof. E. Alaca)
- Currently directing several externally funded projects.
  - Research and development projects focus on: MEMS scanners for display and imaging systems, MEMS Thermal Infrared Imaging Camera development, MEMS Spectrometers, Electrostatic and Electromagnetic actuators, biological and chemical sensors, 3D displays.
  - Research Sponsors: European Commission (since 2006, 5 grants), Microvision Inc.-USA (since 2001, 7 grants), ASELSAN A.S. (TR) (since 2006, 2 grants), Fraunhofer Institute-IPMS-Germany (1 grant), NSF(USA) (1 grant), TÜBİTAK (5 projects),
  - EC funded 7<sup>th</sup> Framework Projects:
    - HELIUM3D (FP7 STREP project, 2008-2011), WP leader.
    - MEMFIS (FP7-STREP project: 2008-2011).
  - EC funded 6<sup>th</sup> Framework Projects (completed)
    - Network of Excellence in Micro-Optics (WP leader. FP6-NoE, 2004-2008),
    - 3D TV Network of Excellence (FP6-NoE, 2004-2008),
    - MINOS Euronet (FP6-SSA, 2004-2008),

### TEACHING

- Teaching load is 4 courses per year (2 per semester) (offered 9 different courses while at Koç Univ.).
- Recently taught undergraduate electrical engineering courses:
  - ELEC202: Electric Circuits
  - ELEC310: Microelectronics,
  - ELEC321: Introduction to Optics,
- Graduate level regular courses
  - ECO522: Introduction to MEMS (micro-electro-mechanical systems),
  - ECO523: Optical Information Processing.

#### Microvision Inc., Seattle, Washington, USA

*Job Titles in Sequence: Research Engineer; Sr. Research Engineer; Staff Engineer;*

- Principal Engineer and Group Lead* 1998-2001  
*Principal Consultant* 2002-present
- PI and Team leader for several optical system design and MEMS scanner development projects
  - Responsible from optical system analysis, design, and performance tradeoffs for the Retinal Scanning Display technology
  - Invented and developed novel subsystems and architectures for laser-scanning microdisplay systems. Filed many invention disclosures (more than 15 US patents issued and many pending).
  - Designed new mechanical and MEMS scanners that have significantly improved the optical, mechanical, and electrical performance of the existing scanners.
  - Supervise optical, electrical, and opto-mechanical engineers in various research projects.
- Georgia Institute of Technology, Atlanta, Georgia, USA**
- TUBITAK- NATO Science Program Graduate Student Fellow* 1993-1994  
*Graduate Research Assistant, Center for Optical Science and Engineering* 1995-1997
- Designed and developed smart-pixel based optoelectronic processor for machine vision applications.
  - Designed novel optical image processing systems by exploiting the unusual AC-coupled characteristics of pyroelectric imaging cameras and smart-pixel focal plane arrays.
- Call / Recall Inc., San Diego, California, USA**
- Co-Op exchange student and Consultant* part time 1996-1997
- Developed novel techniques and architectures for improving the resolution and reducing the crosstalk for 2-photon absorption based 3-D optical memories.
  - Performed optical system design and optimization using ZEMAX and experimentally verified the results.
  - Analyzed the aberration accumulation and correction for imaging through high resolution thick media for multilayer optical storage applications.
- Georgia Tech Research Institute, Atlanta, Georgia, USA** 1996
- Graduate Research Assistant, Electro-Optics, Environment, and Materials Laboratory (EOEML)*
- Performed a feasibility study for the wavefront sensor development for the Next Generation Space Telescope (NGST) project sponsored by NASA's Marshall Space Flight Center.
  - Developed multiresolution spatial filtering algorithms for machine vision applications sponsored by Georgia Tech Vision (GTV) program.
- Bilkent University, Ankara, Turkey** 1993
- Graduate Research and Teaching Assistant, Electrical and Electronics Engineering*
- Taught laboratory classes to Engineering students
  - Performed applied research in optical computing and interconnects.
  - Analyzed the information carrying capacity of free-space optical computing systems and optical Fourier transforming systems.

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## E d u c a t i o n

### Georgia Institute of Technology

School of Electrical and Computer Engineering, Atlanta, Georgia, USA

*Ph.D. in Electrical Engineering*

1997

*Advisor: Dr. William T. Rhodes*

*Thesis Title: "Image Acquisition and Processing with AC-Coupled Cameras"*

- *Graduate Cooperative Degree certificate (for industry work during PhD)*

1997

*MS in Electrical Engineering*

1996

### Bilkent University

Oct. 1992-Sep. 1993

Electrical and Electronics Engineering Department, Ankara, Turkey

*Graduate Course work in Optics, Communications, and Electronics*

**Middle East Technical University**

1988-1992

Electrical Engineering Department, Ankara, Turkey  
*BS in Electrical Engineering*

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**Academic Service:**

- General Chair, IEEE Optical MEMS and Nanophotonics Conference, Istanbul, Turkey, Aug 2011.
- TPC Member, IEEE MEMS Conference, Cancun, Mexico (2011) and Paris, France (2012)
- Local Chair, IEEE Photonics Annual meeting, Antalya, Turkey, Oct 2009.
- Local Chair, International Conference on Opto-mechatronics (ISOT), Istanbul, Turkey, Sep. 2009
- Co-chair, NSF Workshop on Nanophotonics, Koc University, Istanbul, Turkey, 2006
- Organized Micro-Nano Systems Summer Workshop, Koc University, Istanbul, Turkey, 2005
- Chair (3 times) for SPIE Photonics Europe Conf. titled "MEMS, MOEMS, and Micromachining", in Strasbourg, France, in 2004, 2006, 2008
- Initiated and Chaired (4 times) the SPIE Photonics West Conf titled "MOEMS Display and Imaging Systems", in San Jose, California, 2003, 2004, 2005, and 2006

**Awards and Achievements:**

- IEEE Senior Member (Dec 2009)
- **TÜBİTAK-Encouragement** Award from the Scientific and Technical Research Council of Turkey (2009).
- Ten Outstanding Young Person (**TOYP**) Award in *Science and Technology* category, Junior Chamber International (JCI)-Turkey Chapter (2008).
- Special award from Microvision Inc for Outstanding contributions to "*Advancement of Scanner Technologies.*" (2008)
- Distinguished Young Scientist Award from Turkish National Academy of Sciences, **TÜBA-GEBİP** (2007)
- **Werner Von Siemens Faculty Excellence Award** for outstanding research performance at Koç University (2006)
- Doçent title from YÖK (Higher Education Council of Turkey) (2004)
- New Focus Student Award at the Optical Society of America Annual Meeting (1995)
- Co-operative program certificate, Georgia Institute of Technology, Atlanta, USA (1997)
- Among the three recipients of the TUBITAK-NATO Science Program Graduate Fellowship (1992)
- Recipient of Haci Omer SABANCI Foundation scholarship for 4 years (1988-1992)

**Publications**

**Citations:** <http://scholar.google.com/citations?user=4z4L9HMAAAAJ>

Source - Google Scholar (GS)	Total	Citations	H-Index	Journals	Patents (issued, pending)	Edited Books	Book Chapter	Conferences
All Publications	170+	1500+	22	44	23, 11	7	4	100+

**Edited Books:**

1. *MOEMS Display and Imaging Systems*, Hakan Urey, Editor, Proceedings of SPIE, Pages: 360, Volume: 4985, SPIE Press, Bellingham (2003)
2. *MOEMS Display and Imaging Systems II*, Hakan Urey and David Dickensheets, Editors, Proceedings of SPIE, Volume: 5348, SPIE Press, Bellingham (2004)
3. *MEMS, MOEMS, and Micromachining*, Hakan Urey and Ayman El-Fatraty, Editors, Proceedings of SPIE, Volume: 5455, SPIE Press, Bellingham (2004)
4. *MOEMS Display and Imaging Systems III*, Hakan Urey and David Dickensheets, Editors, Proceedings of SPIE, Volume: 5721, SPIE Press, Bellingham (2005)
5. *MOEMS Display and Imaging Systems IV*, Hakan Urey, David Dickensheets, Bishnu Gogoi, Editors, Proceedings of SPIE, Volume: 6114, SPIE Press, Bellingham (2006)
6. *MEMS, MOEMS, and Micromachining II*, Hakan Urey and Ayman El-Fatraty, Editors, Proceedings of SPIE, Volume: 6186, SPIE Press, Bellingham (2006)
7. *MEMS, MOEMS, and Micromachining III*, Hakan Urey, Editor, Proceedings of SPIE, Volume: 6993, SPIE Press, Bellingham (2008)

**Book Chapters:**

1. **Hakan Urey**, *Retinal Scanning Displays*, in Encyclopedia of Optical Engineering, R. Driggers, Editor, Marcel-Dekker, 2003
2. **Hakan Urey** and David Dickensheets, *Display and Imaging Systems*, Ch. 8 in MOEMS and Applications, E. Motamedi, Editor, SPIE Press, Bellingham, 2004
3. **Hakan Urey**, Sid Madhavan, Margaret Brown, Chapter: 10.2.4 "*MEMS Displays*," Handbook of Visual Display Technology, 2011.
4. Jannick P. Rolland, Kevin P. Thompson, **Hakan Urey**, and Mason Thomas, Chapter: 10.4.1 "*See-Through Head Worn Display (HWD) Architectures*," Handbook of Visual Display Technology, 2011.

**Patents:**

1. United States Patent, [7,999,244](#), W. O. Davis, G. T. Gibson, **H. Urey**, T. W. Montague, B. Xue, J. Lewis, "MEMS devices and related scanned beam devices," Issued Aug. 16, 2011
2. United States Patent, [7,986,449](#), W. O. Davis, **H. Urey**, "Induced resonance comb drive scanner" Issued Jul. 26, 2011
3. United States Patent, [7,826,141](#), K. P. Powell, **H. Urey**, A. Malik, R. J. Hennigan, "Scanned-beam heads-up display and related systems and methods" Issued Nov. 2, 2010
4. United States Patent, [7,733,493](#), **H. Urey**, C. Ataman, "Fourier transform spectrometer" Issued June 8, 2010
5. United States Patent, [7,724,210](#), R. B. Sprague, **H. Urey**, D R Brown, M K Brown, J R Lewis, M D Watson, T W Montague, S R Willey, "Scanned light display system using large numerical aperture light source, method of using same, and method of making scanning mirror assemblies" Issued May 25, 2010
6. United States Patent, [7,639,209](#), R. B. Sprague, **H. Urey**, D R Brown, M K Brown, J R Lewis, M D Watson, T W Montague, S R Willey, "Scanned light display system using large numerical aperture light source, method of using same, and method of making scanning mirror assemblies" Issued Dec 29, 2009
7. United States Patent, [7,612,737](#), G. S. Bright, S. W. Straka, P. C. Black, J. G. Moore, J. R. Lewis, **H. Urey**, C. T., Tegreene, "Scanned light beam display with brightness compensation," Issued Nov 3, 2009.
8. United States Patent, [7,580,189](#), H. Urey and K. D. Powell, "Optical element that includes a microlens array and related method," Issued Aug 25, 2009.
9. United States Patent [7,489,433](#), H. Urey and O. Ergeneman, "Method and apparatus for making and using 1D and 2D magnetic actuators," Issued Feb 10, 2009.
10. United States Patent [7,460,305](#), K. D. Powell, H. Urey, A. Malik, R. J. Hannigan, "Scanned-beam heads-up display and related systems and methods," Issued Dec 2, 2008
11. United States Patent [7,339,737](#), H. Urey and C. T. Tegreene, "Beam multiplier that can be used as an exit-pupil expander and related system and method," Issued March 4, 2008
12. United States Patent [7,209,271](#), J. R. Lewis, H. Urey, B. G. Murray, "Multiple beam scanning imager," Issued April 24, 2007
13. United States Patent [7,133,204](#), H. Urey, "Apparatus and methods for generating multiple exit-pupil images in an expanded exit pupil," Issued Nov 7, 2006
14. United States Patent [7,071,594](#), J. Yan, V. Casasanta, S. H. Luanava, H. Urey, F. A. DeWitt, C. T. Tagreene, C. A. Christopher, "MEMS scanner with dual magnetic and capacitive drive," Issued July 4, 2006
15. United States Patent [7,061,450](#), G. S. Bright, S. W. Straka, P. C. Black, J. G. Moore, J. R. Lewis, H. Urey, C. T. Tegreene, "Electronically scanned beam display," Issued: June 13 2006

16. United States Patent [6,954,308](#), H. Urey, "Apparatus and methods for generating multiple exit-pupil images in an expanded exit pupil," Issued: Oct 11, 2005
17. United States Patent [6,795,221](#), H. Urey, "Scanned display with switched feeds and distortion correction," Issued: Sep 21, 2004
18. United States Patent [6,768,588](#), H. Urey, "Apparatus and methods for generating multiple exit-pupil images in an expanded exit pupil," Issued: July 27, 2004
19. United States Patent [6,755,536](#), C. T. Tegreene, J. R. Lewis, H. Urey, "System and method for displaying/projecting a color image," Issued: June 29, 2004
20. United States Patent [6,714,331](#), J. R. Lewis, H. Urey, B. G. Murray, "Scanned imaging apparatus with switched feeds," Issued: March 30, 2004
21. United States Patent [6,639,719](#), C. T. Tegreene, J. R. Lewis, H. Urey, "System and method for using multiple beams to respectively scan multiple regions of an image," Issued: Oct 28, 2003
22. United States Patent [6,515,781](#), J. R. Lewis, H. Urey, B. G. Murray, "Scanned imaging apparatus with switched feeds," Issued: Feb 4, 2003
23. United States Patent [6,362,912](#), J. R. Lewis, H. Urey, B. G. Murray, "Scanned imaging apparatus with switched feeds," Issued: March 26, 2002

Pending Patent Applications: More than 10 US and EU Patents Pending.

- H. Urey, M. Sayinta, Apparatus for Displaying 3D Images, US 20110001804, Jan 6, 2011
- H. Urey, R. B. Sprague, S. O. Isikman, Scanning light collection, US 20080237349, Oct 2, 2008
- R. B. Sprague, H. Urey, S. O. Isikman, Variable laser beam focus, US 20080230611, Sep 25, 2008
- R. B. Sprague, H. Urey, Display configured for varying the apparent depth of selected pixels, US 20080018641, Jan 24, 2008
- C. A. Wiklof, H. Urey, S. Luanava, Scanned beam imager and endoscope configured for scanning beams of selected beam shapes and/or providing multiple fields-of-view, US 20070276187, November 29, 2007
- H. Urey, H. Torun, Imaging Detector Array with Optical Readout, US 20070045541, March 1, 2007
- H. Urey, E. Alaca, "Miniaturized integrated micro electro-mechanical systems (mems) optical sensor array," USPTO provisional patent application, Oct 2010
- H. Urey, E. Alaca, E. Timurdogan, "MEMS biosensor for parallel and highly sensitive and specific detection of hepatitis," WIPO PCT Application, Jan 2011
- H. Urey, Kontak lens ile 3 boyutlu görüntüleme sistemi, Türk Patent Enstitüsü, Ekim 2012
- H. Urey, F. H. Y. Acar, C. Elbuken, B. Can, V. Akgun, K. Uygurmen, A Method and Apparatus for Identification of functional fluids, WIPO/PCT Application Filed Oct 2012
- H. Urey, M. K. Hedili, J. Miller, "High Gain Display Screen With Rotated Microlens Array", USPTO Application filed Jan 2013

Recent Inventions with *Koç graduate students* as co-inventors are all licensed to Industry:

- H. Urey, O. Ergeneman, United States Patent 7,489,433, "Method and apparatus for making and using 1D and 2D magnetic actuators," Issued Feb 10, 2009 (Licensed to Microvision Inc., USA)
- H. Urey, H. Torun, US Patent Pending, European Patent EP1757914, Issued 2007-02-28 (Licensed to ASELSAN, Turkey).
- H. Urey, C. Ataman, US Patent, 7,733,493, "Fourier transform spectrometer" Issued June 8, 2010 (Licensed to Fraunhofer Institute for Photonics Microsystems, Germany).
- H. Urey, R. Sprague, S. O. Isikman, "Scanning light collection," US Patent Pending, 20080237349 (Licensed to Microvision Inc., USA)
- R. Sprague, H. Urey, S. O. Isikman, "Variable laser beam focus," US Patent Pending, 20080230611 (Licensed to Microvision Inc., USA)
- H. Urey, M. Sayinta, "Method and apparatus for 3D Display," WIPO Application 2008 (Licensed to industry)

- H. Urey, E. Alaca, E. Timurdogan, “Biosensor for multianalyte detection,” Patent pending (Licensed to Inventram Inc.)
- H. Urey, U. Baran et al, “Rotary MEMS Scanner,” Patent pending (Licensed to industry)
- H. Urey, K. Aksit, M. K. Hedili, “Method and apparatus for 3D display screen,” Patent pending (Licensed to industry)
- H. Urey, F. H. Y. Acar, C. Elbuken, B. Can, V. Akgun, K. Uygurmen, “A Method and Apparatus for Identification of Functional Fluids,” Patent pending (Licensed to OPET A.Ş)
- H. Urey, M. K. Hedili, J. Miller, “High Gain Display Screen With Rotated Microlens Array” (Licensed to Microvision Inc.)

### International Journal Papers:

#### Accepted / Published:

1. M. K. Hedili, M. Freeman, and H. Urey, “Windshield Embedded Direct Projection Head-up Display System for Automotive Applications,” *Applied Optics*, 2013.
2. U. Baran, D. Brown, S. Holmstrom, D. Balma, W. O. Davis, P. Murali, and U. Urey, “Resonant PZT MEMS Scanner for High-Resolution Displays,” *J. Microelectromechanical Systems*, doi: 10.1109/JMEMS.2012.2209405, 2012.
3. U. Baran, W. O. Davis, S. Holmstrom, D. Brown, J. Sharma, S.K Gokce, and H. Urey, “Linear Stiffness Rotary MEMS Stage,” *J. Microelectromechanical Systems*, vol. 21, pp. 514–516, 2012.
4. H. R. Seren, S. Holmstrom, P. Ayerden, J. Sharma, and H. Urey, “Lamellar-Grating-Based MEMS Fourier Transform Spectrometer,” *J. Microelectromech. Syst.*, vol. 21, pp. 331–339, 2012.
5. K. Aksit, O. Eldes, S. Viswanathan, M. Freeman, **H. Urey**, “Portable 3D laser projector using mixed polarization technique,” *Journal of Displays*, vol. 8 (10), pp. 582-589, 2012
6. Onur Ferhanoglu and **Hakan Urey**, “Sensitivity enhancement of grating interferometer based two-dimensional sensor arrays using two-wavelength readout,” *Applied Optics*, Vol. 50, Issue 19, pp. 3289-3295, 2011.
7. Erman Timurdogan, B. Erdem Alaca, I. Halil Kavakli, **Hakan Urey**, “MEMS biosensor for detection of Hepatitis A and C viruses in serum,” *Biosensors and Bioelectronics*, Volume 28, Issue 1, pp. 189-194, 2011.
8. O. Ferhanoglu, M. F. Toy, and **H. Urey**, “Fourier optics analysis of grating sensors with tilt errors,” *Optics Letters*, Vol. 36, Issue 12, pp. 2254-2256, 2011.
9. (*Invited paper*) **H. Urey**, K. V. Chellephan, E. Erden, and P. Surman, “State of the Art in Stereoscopic and Autostereoscopic Displays,” *Proc. IEEE*, 99 (4), 540-555, 2011.
10. S. K. Gokce, S. Holmstrom, C. Hibert, S. Olcer, D. Bowman and **H. Urey**, “Two-Dimensional MEMS Stage Integrated with Microlens Arrays for Laser Beam Steering,” *J. Microelectromechanicalsystems*, Vol. 20, , pp. 15-17, 2011.
11. E. Timurdogan, N. Ozber, S. Nargul, S. Yavuz, M. S. Kilic, I. H. Kavakli, **H. Urey**, and B. E. Alaca, ” Detection of human K-opioid antibody using microresonators with integrated optical readout,” *Biosensors and Bioelectronics*, Vol. 26, pp. 195-201, 2010.
12. A. Arslan, D. Brown, W. Davis, S. Holmstrom, S. K. Gokce, **H. Urey**, “Comb-Actuated Resonant Torsional Microscanner with Mechanical Amplification,” *IEEE J. Microelectromechanical Systems*, Vol. 19, No. 4, pp. 936-943, 2010.
13. (*Invited paper*) K. V. Chellephan, E. Erden, and **H. Urey**, “Laser-based displays: a review,” *Applied Optics* Vol. 49 (Feature issue on Lasers: The first fifty years), Issue 25, pp. F79-F98, 2010.
14. G. Hatipoglu, **H. Urey**, “FR4 based electromagnetic energy harvester for wireless sensor nodes,” *Smart Materials and Structures*, Vol. 19, 015022 (11 pages), 2010.
15. O. Ferhanoglu, H. Seren, S. Lüttjohann, **H. Urey**, “[Lamellar grating optimization for Fourier transform spectrometers](#),” *Optics Express*, Vol. 17, pp. 21289-21301, 2009.
16. S. K. Gokce, S. Holmstrom, C. Hibert, C. Ataman, A. Arslan, H. R. Seren, **H. Urey**, “MEMS Stage Integrated with Microlens Arrays for High-Resolution Beam Steering,” *Procedia Chemistry*, Volume 1, Issue 1, Pages 1319-1322, 2009 (also published as Proceedings of the Eurosensors XXIII conference).
17. G. Hatipoglu, **H. Urey**, “FR4-based electromagnetic energy harvester for wireless tyre sensor nodes,” *Procedia Chemistry*, Volume 1, Issue 1, Pages 1211-1214, 2009 (also published as Proceedings of the Eurosensors XXIII conference).
18. C. Ataman, H. R. Seren, H. Schenk, **H. Urey**, “*Dynamic Characterization of MEMS Scanners*,” *Sensors & Transducers Journal*, Vol. 108, Issue 9, pp. 31-39 (2009)

19. S. O. Isikman, S. Varghese, F. Abdullah, R. Augustine, R. B. Sprague, V. Andron, and **H. Urey**, "[Advanced imaging with dynamic focus and extended depth using integrated FR4 platform](#)," *Optics Express*, Vol. 17, Issue 19, pp. 17179–17189 (2009)
20. H. R. Seren, **H. Urey**, "Optical [Characterization of Micro and Nano Mechanical Systems in Two Dimensions](#)," *Sensors and Actuators: A. Physical*, Vol. 156, p. 217-221, [doi:10.1016/j.sna.2009.02.014](#) 2009.
21. M. F. Toy, O. Ferhanoglu, H. Torun, **H. Urey**, "[Uncooled Infrared Thermomechanical Detector Array: Design, Fabrication, and Testing](#)," *Sensors and Actuators: A. Physical*, Vol. 156, p. 88-94, [doi:10.1016/j.sna.2009.02.010](#) 2009
22. C. Ataman, **H. Urey**, "[Compact Fourier Transform Spectrometers using FR4 Platform](#)," *Sensors and Actuators: A. Physical*, Vol. 151, pp. 9-16, 2009 ([doi:10.1016/j.sna.2008.12.022](#), 2009)
23. S. O. Isikman, **H. Urey**, "[Dynamic modeling of magnetic film actuators](#)," *IEEE Transactions on Magnetics*, Vol. 45, No: 7, pp. 2912-2919, 2009.
24. S. O. Isikman, R. B. Sprague, **H. Urey**, "[FR4 laser scanner with dynamic focus](#)," *IEEE Photonics Technology Letters*, Vol. 21, p. 233-235, 2009
25. A. Ozturk, H. I. Ocakli, N. Ozber, H. Kavakli, **H. Urey**, E. Alaca, "[A magnetically actuated resonant mass sensor with integrated optical readout](#)," *IEEE Photonics Technology Letters*, Vol. 20, No. 23, p. 1905-1907, 2008
26. **H. Urey**, S. Holmstrom, A. D. Yalcinkaya, "[Electromagnetically actuated FR4 Scanners](#)," *IEEE Photonics Tech. Lett.*, Vol. 20, p. 30-32, 2008
27. O. Ferhanoglu, M. F. Toy, **H. Urey**, "[Two-wavelength Grating Interferometry for MEMS Sensors](#)," *IEEE Photonics Tech. Lett.*, Vol. 19, p. 1895-1897, 2007
28. (Invited review paper) P. Benzie, J. Watson, P. Surman, I. Rakkolainen, K. Hopf, **H. Urey**, V. Sainov, C. von Kopylow "[A survey of 3-DTV Displays: Techniques and Technologies](#)" *IEEE Transactions on Circuits and Systems for Video Technology*, Vol. 17, p.1647-1658, 2007
29. A. Akatay, **H. Urey**, "[Design and Optimization of Microlens Array Based High Resolution Beam Steering System](#)," *Optics Express*, Vol. 15, No. 8, p. 4523-4529, 2007
30. Serhan O. Isikman, Olgac Ergeneman, Arda D. Yalcinkaya, **Hakan Urey**, "[Modeling and Characterization of Soft Magnetic Film Actuated 2D Scanners](#)," *J. Selected Topics in Quantum Electronics*, Vol. 12, pp.283-289, Mar/Apr. 2007
31. Arda Yalcinkaya, **Hakan Urey**, Sven Holmstrom, "[NiFe Plated Biaxial MEMS Scanner for 2-D Imaging](#)," *IEEE Photonics Technology Letters*, Vol. 19, p. 330-332, 2007
32. Arda D. Yalcinkaya, Olgac Ergeneman, **Hakan Urey**, "[Polymer Magnetic Scanners for Bar Code Applications](#)," *Sensors and Actuators A: Physical*, Vol. 135, pp.236-243, 2007
33. Caglar Ataman, **Hakan Urey**, Alexander Wolter, "[MEMS-based Fourier Transform Spectrometer](#)," *J. Micromechanics and Microengineering*, Vol.: 16, Pages: 2516-2523, 2006
34. Ata Akatay, Caglar Ataman, **Hakan Urey**, "[High-resolution beam steering using microlens arrays](#)," *Optics Letters*, Vol. 31(19), p. 2861-2863, Oct 2006
35. Hamdi Torun, **Hakan Urey**, "[Thermal Deflections in Multilayer MEMS Structures and Athermalization](#)," *J. Applied Physics* 100 (2): Art. No. 023527, p. 1-6, July 2006
36. Arda D. Yalcinkaya, **Hakan Urey**, Dean Brown, Tom Montague, Randy Sprague, "[Two-axis Electromagnetic Microscanner for High Resolution Displays](#)," *IEEE J. Microelectromechanical Systems*, Vol. 15 (4), p. 786-794, Aug 2006.
37. Hamdi Torun, **Hakan Urey**, "[Uncooled Thermo-mechanical Detector Array with Optical Readout](#)," *Opto-Electronics Review*, Vol. 14 (1), p. 55–60, 2006
38. Caglar Ataman, **Hakan Urey**, "[Modeling and characterization of comb actuated resonant microscanners](#)," *J. Micromechanics and Microengineering*, Vol. 16, p. 9-16, 2006
39. **Hakan Urey**, Cihan Kan, Wyatt O. Davis, "[Vibration mode frequency formulae for micromechanical scanners](#)," *J. Micromechanics and Microengineering*, Vol.: 15, Pages: 1713-1721, Aug, 2005
40. **Hakan Urey** and Karlton D. Powell, "[Microlens-array-based exit-pupil expander for full-color displays](#)," *Applied Optics*, Vol.: 44, Issue: 23, Pages: 4930-4936, Aug, 2005
41. **Hakan Urey**, "[Spot size, depth of focus, and diffraction ring intensity formulas for truncated Gaussian beams](#)," *Applied Optics*, Vol. 43, No. 3, Jan 2004
42. **Hakan Urey**, "[Diffractive Exit-Pupil Expander for Display Applications](#)," *Applied Optics*, Vol. 40, No. 32, p.5840-5851, November 2001
43. Haldun M. Ozaktas and **Hakan Urey**, "Space-bandwidth product of conventional Fourier transforming systems," *Optics Communications*, vol. 104, pp. 29-31, 1993.
44. Haldun M. Ozaktas, **Hakan Urey**, and Adolf W. Lohmann, "[Scaling of diffractive and refractive lenses for optical computing and interconnections](#)," *Applied Optics*, vol. 33, pp. 3782-3789, 1994.

### **Thesis Directed:**

#### **PhD Thesis:**

1. Çağlar Ataman, “Comb Actuated MEMS Platforms for Spectroscopy and Laser Scanning Systems,” Koç University, 2008.
2. Onur Ferhanoglu, “Design, Fabrication and Characterization of a MOEMS based Thermal Imaging System,” Koç Üniversitesi, 2010.
3. Kaan Aksit, 3D displays, ongoing
4. Onur Cakmak, Biosensors, ongoing
5. Aref Mostafazadeh, Biosensors, ongoing
6. Ulas Adıyan, Thermal imaging, ongoing

#### **MS Thesis:**

1. Çağlar Ataman. Design, modeling and characterization of electrostatically actuated microscanners. Master’s thesis, Koç University, December 2004.
2. Hamdi Torun. Design and fabrication of thermo-mechanical thermal detector arrays with optical readout. Master’s thesis, Koç University, 2005.
3. Olgaç Ergeneman. Design and fabrication of polymer magnetic actuators for scanning. Master’s thesis, Koç University, 2005.
4. Ahmet Ata Akatay. Beam steering using microlens arrays. Master’s thesis, Koç University, 2006.
5. Murat Sayın. 3d display system using scanning led array modules. Master’s thesis, Koç University, 2008.
6. Serhan Işıkman. Electromagnetically actuated optical micro-mechatronic systems integrated on pcb. Master’s thesis, Koç University, 2008.
7. Fatih Toy. Optical readout for infrared thermo-mechanical detector array. Master’s thesis, Koç University, 2008.
8. Aslıhan Arslan. MEMS scanners actuated with mechanical coupling and comb drives. Master’s thesis, Koç University, 2008.
9. Huseyin Rahmi Seren, MEMS Fourier transform spectrometers. Master’s thesis, Koç University, 2009.
10. Gökhan Hatipoğlu, FR4 based energy scavengers. Master’s thesis, Koç University, 2009.
11. Erdem Erden, Laser Scanning Based Autostereoscopic 3D Display, Master’s thesis, Koç University, 2010.
12. Sertan Kutal Gokce, Electrostatic MEMS Actuators for Endoscopic Imaging and High Resolution Displays, Master’s thesis, Koç University, 2010.
13. Nadire Pelin Ayerden, MEMS Fourier Transform Spectrometers, Koç University, March 2012
14. Refik Burak Erarslan, Thermal imaging, Koç University, July 2012
15. Utku Baran, MEMS scanners, Koç University, July 2012
16. Basarbatu Can, Real-time identification of functional fluids, ongoing
17. Osman Eldeş, 3D displays, ongoing
18. Ziya Isiksacan, Biosensors, ongoing
19. Ozgecan Karabulut, 3D Displays, ongoing

### **Invited Presentations at Conferences:**

- “3D displays using MEMS and Micro-optics (Invited paper),” OSA Photonics 2012 Conference, Chennai, India, Dec 2012
- “Novel 3D Displays (Invited presentation),” 14<sup>th</sup> National Photonics Conference, Istanbul, Sep. 2012
- “Biosensors for Narcotics (Invited presentation),” International Academy for Legalized Medicine Congress, Istanbul, July 2012
- “MEMS Biosensors for POC Diagnostics (Invited presentation).” NanoMedicine Congress, Ankara, Turkey, June 2012
- “SOI Based MEMS Displays, Spectrometers (Invited presentation),” EPFL CMI Workshop, Lausanne, May 2012
- “MEMS biosensor for POC diagnostics (Invited presentation),” JRC Biotechnology Workshop, Ispra, Italy, Nov. 2011



- “3D Laser Scanning Displays (Invited paper), 3DMR 3D Displays and Materials Research Conference, Jeju-Korea, June 2011
- “Optical MEMS Devices and Applications (Invited presentation), 1. National MEMS Workshop, ODTÜ-Ankara, Dec. 2010
- “MEMS Stages and Scanners for Display, Imaging, and Spectroscopy and Their Dynamic Characterization (Invited Presentation),” Asian Conference on Experimental Mechanics, ICEM 2009, Singapore, Nov. 2009.
- “MEMS and FR4 Scanners for Microdisplay and Imaging Applications (Invited Presentation),” ICMEMS Conference, Chennai, India, Jan 2009
- “MEMS Fourier Spectrometers (Invited Presentation),” OASIS Conference, Tel-Aviv, Israel, Mar. 2007
- “Electromagnetic Actuators for Scanners (Keynote Paper),” Euroensors XX Conference, Göteborg, Sweden, Sep. 2006
- “MEMS for biosensing and endoscopic imaging (Invited paper),” International Workshop on Bio-Nano Technology, İTÜ-Istanbul-Turkey, Nov. 2006.
- “Micro-optics and MEMS: A powerful combination with many applications (Invited Lecture),” SPIE Photonics Expert Lectures, Warsaw, Poland, 2005
- “Two-axis MEMS Scanner for Display and Imaging Applications (Invited Paper)”, IEEE Optical MEMS 2005 Conference, Aug. 2005, Oulu, Finland.
- “MEMS and Microscanners (Invited Lecture),” NSF International Workshop on Nanophotonics, June, 2005, Koc University, Istanbul.
- “High performance resonant MEMS scanners for display and imaging applications (Invited Paper),” in Optomechatronic micro/nano components, devices, and systems conference, Philadelphia, USA, October 2004.
- “Mikro-Elektro-Mekanik Sistem (MEMS) Teknolojisi Kullanılan Displayler (Invited presentation)”, 3. Ulusal Elektro-Optik Calisma Toplantisi, Aselsan, Ankara, November, 2001.

### **Invited University Lectures and Seminars:**

- “MEMS Display and Imaging Devices,” National Photonics and Sensors Workshop, Tubitak-UME, Gebze, Sep 2012
- “Optical MEMS Devices and Systems,” Sabanci University, Turkey, Jan 2011
- “Optical MEMS sensors and actuators for Display, Spectroscopy and Imaging,” Kyoto University, Japan, Aug 13, 2010
- “Optical MEMS for biosensing,” EPFL, Neuchatel, Switzerland, July 19, 2010
- “Optical MEMS for biosensing,” EPFL, Lausanne, Switzerland, July 13, 2010
- “SOI based optical MEMS components and systems,” Bilkent University, International Workshop on Cleanroom Training, June 25, 2010
- “Optical MEMS sensors and actuators for Display, Spectroscopy and Imaging ,” Nanyang Technical University, Singapore, Nov 20, 2009
- “Optical MEMS sensors and actuators for Display, Spectroscopy and Imaging ,” National University of Singapore, Nov 19, 2009
- “MOEMS for Display, Spectroscopy and Imaging Applications,” TÜBİTAK-UME, Turkey, May 15, 2009
- “MOEMS for Display, Spectroscopy and Imaging Applications,” Sabanci University, Turkey, March 27, 2009
- “MOEMS for Display, Spectroscopy and Imaging Applications,” Bilkent University, Turkey, March 5, 2009
- “[MOEMS for Display, Spectroscopy and Imaging Applications](#),” EPFL-Lausanne, Switzerland, Feb 6, 2009
- “MOEMS for Display, Spectroscopy and Imaging Applications,” EPFL-Neuchatel, Switzerland, Feb 5, 2009
- “Optical Micro and Nano Systems: Marriage of Photonics, Electrical Engineering, and Mechanical Engineering,” Science Seminar, Koç University, May 8, 2008
- “Optical MEMS Devices and Applications,” University of Twente, Netherlands, Feb 4, 2008
- “Devices and Applications in Optical MEMS,” Bosphorus University, Istanbul, Turkey, May 15, 2007
- “Electromagnetic actuated MEMS for Displays and Imaging,” Georgia Institute of Technology, Atlanta, USA, Jan 25, 2007
- “Devices and Applications in Optical MEMS,” Fraunhofer IPMS, Dresden, Germany, Nov 29, 2006
- “Retinal Scanning Displays,” Stanford University, California, USA, January 2004
- “Optics and MEMS: A powerful combination for many applications,” Sabanci University, Istanbul, June, 2003

- “Optical Micromachines and Micro-electro-mechanical systems (MEMS),” Koç University, Engineering Seminar, May 7, 2002.
- “Novel Optical MEMS Display Technologies: Displays that combine microoptics, microelectronics, and micromechanics,” Koç University, Engineering Seminar, October 5, 2001
- “Micro-optics technologies for Retinal Scanning Displays”, The Boeing Company, Seattle, 1999.
- “Recent developments in Retinal Scanning Displays”, in Exploiting Emerging Display Applications and Technologies Workshop, Optoelectronics Industry Development Association (OIDA), San Jose, 2000.

### **International Conference Papers:**

#### **Internships Prior to PhD Research at Univ. Kent and Bilkent University:**

- Zafer Urey, Nathan J.Gomes, Phillip A.Davies, and Hakan Urey, "Optoelectronic Mixing at 1300nm: Performance Comparison of an InGaAs/InP Heterojunction FET and an InGaAs PIN Photodiode," Proc. Bilkent Int. Conf. on Lightwave Technology and Communications, pp. 102-108, Ankara, Turkey, 27-28 July 1992.
- Haldun M. Ozaktas, Adolf W. Lohmann, and Hakan Urey, "Scaling of diffractive and refractive lenses for optical computing and interconnections," 1993 OSA Annual Meeting Technical Digest, page 43, Toronto, Canada, October 1993.
- Haldun M. Ozaktas, Billur Barshan, David Mendlovic, and Hakan Urey, "Space-variant filtering in fractional fourier domains," ICO International Conference on Optical Computing, Technical Digest, pages 159-160. Heriot-Watt University, Edinburgh, August 1994.

#### **PhD Research at Georgia Tech:**

- Hakan Urey and William T. Rhodes, "Optoelectronic Camera for multiscale Gabor transforms," 1995 OSA Annual Meeting Technical Digest, p. 184, Portland, Oregon, September 1995.
- Hakan Urey, William T. Rhodes, Stephen P. DeWeerth, and Timothy J. Drabik, "Optoelectronic Image Processor for Multiresolution Gabor Filtering," Proceedings of the IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP), vol.6, pp. 3236--3239, Atlanta, Georgia, May 1996.
- Hakan Urey and William T. Rhodes, "Optoelectronic image processor for Gabor filter-based machine vision applications," in Materials, Devices, and Systems for Optoelectronic Processing, John A. Neff, Bahram Javidi, Editors, Proc. SPIE, Vol. 2848, pp. 92-104, Denver, Colorado, August 4-9 1996.
- Hakan Urey and William T. Rhodes, "Image processing with pyroelectric imaging camera," 1996 OSA Annual Meeting Technical Digest, page 112, Rochester, New York, October 1996, paper printed in Proc. Optics & Imaging in the Information Age, pp. 292-294.
- Hakan Urey, Charles S. Wilson, and William T. Rhodes, "VLSI based image plane detector to perform filtering operations," 1996 OSA Annual Meeting Technical Digest, page 112, Rochester, New York, October 1996, paper printed in Proc. Optics & Imaging in the Information Age, pp. 282-285.
- Hakan Urey and William T. Rhodes, "Image processing using pyroelectric detectors," Optics in Computing '97, OSA 1997 Technical Digest Series Volume 8, pages 178--180, Incline Village, Nevada, March 18-21 1997.
- Hakan Urey, William T. Rhodes, H. John Caulfield, and Zafer Urey, "High signal-to-noise-ratio image processing in low-signal-to-bias-ratio environment," Algorithms, Devices, and Systems for Optical Information Processing, Bahram Javidi, Ed., Proc. SPIE vol. 3159, San Diego, California, August 1997.
- William T. Rhodes, Gisele Welch, and Hakan Urey, "Non-imaging optical methods for measuring Fourier components of moving, incoherently-illuminated objects," Optics in Computing '98, Brugge, Belgium, June 1998 also printed in European Optical Society A-Pure and Applied Optics, 1998.

#### **3D Optical Storage Research (Internship at Call/Recall Inc.):**

- Hakan Urey and Frederick B. McCormick, "Storage limits of two-photon based three-dimensional memories," Optics in Computing '97, OSA 1997 Technical Digest Series Volume 8, pages 134--136, Incline Village, Nevada, March 18-21 1997.
- Hakan Urey and Frederick B. McCormick, "Two-photon three-dimensional memories: resolution and crosstalk issues," Optics in Computing '97, OSA 1997 Technical Digest Series Volume 8, pages 189-191, Incline Village, Nevada, March 18-21 1997.

- Hakan Urey and Frederick B. McCormick, "[Aberration accumulation for imaging through high resolution thick media](#)," Algorithms, Devices, and Systems for Optical Information Processing, Bahram Javidi, Ed., Proc. SPIE, vol. 3159, San Diego, California, August 1997.

### Scanner and Display Research While at Microvision Inc.

- Hakan Urey and John R. Lewis, "Scanning display contrast and resolution," Proc. Asia Display'98, Seoul, Korea, September 1998.
- Hakan Urey, David W. Wine, and John R. Lewis, "[Scanner design and resolution tradeoffs for miniature scanning displays](#)," Flat Panel Displays, Proc. SPIE vol. 3636, San Jose, California, January 1999.
- Hakan Urey, Baldwin Ng, Ned Nestorovic, and Abraham Gross, "[Optics design and MTF Budget for laser scanning displays](#)," Head-mounted Displays IV, Aerosense'99, Proc. SPIE Vol. 3689, Orlando, Florida, April 1999.
- Hakan Urey, "Recent advances in laser scanning displays," Head-mounted Displays V, Aerosense'00, Proc. SPIE Vol. 4021, pp. 20-26, Orlando, Florida, April 2000.
- Hakan Urey, "Diffraction limited resolution and maximum contrast for scanning displays," Society of Information Display Symposium 2000, Long Beach, California, May 2000.
- Andy J. Stevens, Hakan Urey, Peggy Lopez, Tasso R.M.Sales, R. McGuire, and Daniel H.Raguin, "Diffractive optical elements for numerical aperture expansion in retinal scanning displays," OSA Technical Digest on Diffractive Optics and Micro Optics, p. 316-318, Quebec City, Canada, June 2000
- Hakan Urey, David Wine, and Thor Osborn, "[Optical performance requirements for MEMS-scanner based microdisplays](#)," Conf. on MOEMS and Miniaturized Systems, SPIE Vol. 4178, pp. 176-185, Santa Clara, California (2000) (download paper in PDF format)
- David W. Wine, Mark P. Helsel, Lorne Jenkins, Hakan Urey, Thor D. Osborn, "[Performance of a Biaxial MEMS-Based Scanner for Microdisplay Applications](#)," Conf. on MOEMS and Miniaturized Systems, SPIE Vol. 4178, pp. 186-196, Santa Clara, California (2000)
- Karlton Powell, Hakan Urey, Mircea Bayer, "Multibeam bidirectional raster scanning in Retinal Scanning Displays," Helmet and Head-Mounted Display VI, Proc. SPIE Vol. 4361, pp.77-88 ,Orlando, Florida, April 2001
- Margaret Brown, Timothy Gong, Selso Luanava, Hakan Urey, Daniel R. Neal and James Roller "[Measurement of the dynamic deformation of a high frequency scanning mirror using a Shack-Hartman wavefront sensor](#)", SPIE Annual Meeting, Vol.4451, pp.480-488 ,San Diego, California, July 2001
- Hakan Urey, Frank DeWitt, Karlton Powell, and Mircea Bayer, " High-Frequency Raster Pinch Correction Scanner for Retinal Scanning Displays," Conf. on MOEMS and Miniaturized Systems, SPIE Vol. 4561, pp.45-54, San Francisco, California, October 2001
- H. Urey, F. DeWitt IV, S. Luanava, "Optical scanners for high-resolution RSD systems," Head and Helmet Mounted Displays VI, Proc. SPIE, Vol. 4711, pp.214-223,Orlando, Florida, April 2002.
- K. Powell, H. Urey, "Novel approach to exit pupil expansion for wearable displays," Head and Helmet Mounted Displays VI, Proc. SPIE, Vol. 4711, pp. 235-248 Orlando, Florida, April 2002.

### Research Publications at Koc University:

1. Hakan Urey, "[Torsional MEMS scanner design for high-resolution display systems](#)," in Optical Scanning II, Proc. SPIE Vol. 4773, pp. 27-37 Seattle, Washington, July 2002.
2. Hakan Urey, "Resonant MOEMS scanner design and dynamics," MOEMS 2002, Proc. IEEE LEOS, Lugano, Switzerland, August 2002.
3. Hakan Urey, F. A. DeWitt IV, P. A. Lopez, and J. Tauscher, "[MEMS Sinusoidal raster correction scanner for SXGA displays](#)," in MOEMS Display and Imaging Systems, H. Urey, Ed., SPIE Proc. Vol. 4985, pp.106-114, San Jose, California, Jan 2003.
4. Hakan Urey, Randy Sprague, "[Biaxial MEMS raster scanner with linear ramp drive](#)," Optical MEMS 2003, IEEE-LEOS, Waikoloa, Hawaii, Aug 2003
5. Caglar Ataman, Hakan Urey "Nonlinear frequency response of comb-driven microscanners," MOEMS Display and Imaging Systems II, Proc. SPIE Vol. 5348, Pages: , Jan 2004
6. Caglar Ataman, Ozgur Kaya, Hakan Urey, "Analysis of parametric resonances in comb-driven microscanners," in MEMS, MOEMS, and Micromaching, Proc. SPIE Vol. 5455, p. 128-136, Strasbourg, France, April 2004. (download paper in PDF format)
7. Hakan Urey and Karlton D. Powell, "[Microlens array-based exit pupil expander for full-color display applications](#)," in Photon Management, Proc. SPIE Vol. 5456, p. 227-236, Strasbourg-France, April 2004.

8. Leszek Salbut, Jacek Kacperski, Adam R. Styk, Michal Jozwik, Christophe Gorecki, Hakan Urey, Alain Jacobelli, and Thierry Dean, "Interferometric methods for static and dynamic characterizations of micromembranes for sensing functions," in *Optical Micro- and Nanometrology in Manufacturing Technology*, Proc. SPIE Vol. 5458, p. 16-24, Strasbourg-France, April 2004.
9. Hakan Urey, Cihan Kan, Caglar Ataman, "Dynamic Modeling of Comb-Driven Microscanners," *Optical MEMS 2004*, Transactions of IEEE-LEOS, Paper I4, Takamatsu, Japan, August 2004
10. Hakan Urey, "[High performance resonant MEMS scanners for display and imaging applications \(Invited Paper\)](#)," in *Optomechatronic micro/nano components, devices, and systems conference*, Proc. SPIE, Vol. 5604, Philadelphia, Pennsylvania, October 2004.
11. Hakan Urey, "[MEMS Scanners for Display and Imaging \(Invited paper\)](#)," IEEE-LEOS Optical MEMS Conference 2005, Finland, August 2005
12. Hamdi Torun, Hakan Urey, "[Uncooled thermal camera with optical readout](#)," in *Optoelectronics*, Proc. SPIE Vol. 5957, Warsaw, Poland, August 2005
13. Olgaç Ergeneman, Arda D. Yalçinkaya, Melih Altun, Rifat Türsen, Hakan Urey, "[Polymer Magnetic Scanner](#)," MME Conference, Sep, 2005, Goteborg, Sweden
14. C. Ataman, H. Urey, S. Isikman, A. Wolter, "[A Fourier transform spectrometer using resonant vertical comb actuators](#)," in *MEMS, MOEMS, and Micromaching*, Proc. SPIE Vol. 6186, Strasbourg-France, April 2006.
15. Caglar Ataman, Yves Petremand, Wilfried Noell, Hakan Urey, Nico F. de Rooij, "[A 2D MEMS Stage for Optical Applications](#)," in *MEMS, MOEMS, and Micromaching*, Proc. SPIE Vol. 6186, Strasbourg-France, April 2006.
16. A. Akatay, H. Suyal, A. J. Waddie, M. R. Taghizadeh, H. Urey, "Comparative performance analysis of 100% fill-factor microlens arrays: fabricated by various methods," in *Micro-Optics, VCSELs, and Photonic Interconnects: Fabrication, Packaging, and Integration*, Proc. SPIE Vol. 6185, Strasbourg, France, April 2006.
17. \*H. Urey, A. Yalcinkaya, S. Isikman, S. Holmstrom "Electromagnetic Actuators for Scanners (Keynote Paper)," *Euroensors XX Conference*, Göteborg, Sweden, Sep. 2006
18. \*C. Ataman and **H. Urey**, "Vertical Resonant Comb Actuators for Fourier Transform Spectroscopy," TuA2, IEEE-LEOS Optical MEMS Conference, Big Sky, Montana, USA, August 2006
19. \*H. Torun, O. Ferhanoglu, **H. Urey**, "Thermo-Mechanical Detector Array with Optical Readout," P18, IEEE-LEOS Optical MEMS Conference, Big Sky, Montana, USA, August 2006
20. W. O. Davis, D. Brown, M. Helsel, R. Sprague, G. Gibson, A. Yalcinkaya, H. Urey, "High-performance silicon scanning mirror for laser printing," Proc. SPIE Vol. 6466, in *MOEMS and Miniaturized Systems VI*, 2007
21. J. Ollila, M.F. Toy, O. Ferhanoglu, P. Karioja, **H. Urey**, "Vacuum Package design for a MEMS based IR Detector Array," *European Microelectronics and Packaging Conference*, Finland, June 2007
22. M. F. Toy, O. Ferhanoglu, **H. Urey**, "Two-wavelength Grating Interferometry for Extended Range MEMS Metrology," *IEEE-LEOS Optical MEMS Conference*, Hualien, Taiwan, August 2007
23. M. Sayinta, H. Urey, "Scanning LED Array 3D displays" *3D Conference*, Kos, Greece, May 2007
24. S. Holmstrom, A. D. Yalcinkaya, S. Isikman, C. Ataman, **H. Urey**, "FR-4 as a New MOEMS Platform", IEEE-LEOS Optical MEMS Conference, p.25-26, Hualien, Taiwan, August 2007
25. O. Ferhanoglu, M. F. Toy, G. Unal, H. Kalyoncu, G. Kabuli, A. U. Caliskan, **H. Urey**, "Thermal-mechanical Detector Array with Integrated Diffraction Grating," [Lasers and Electro-Optics Society, 2007. LEOS 2007. The 20th Annual Meeting of the IEEE](#), Oct. 2007, pp.:836 – 837, Digital Object Identifier 10.1109/LEOS.2007.4382668
26. S. O. Isikman, H. Urey, "Dynamic Modeling of Magnetic Film Actuators", [Lasers and Electro-Optics Society, 2007. LEOS 2007. The 20th Annual Meeting of the IEEE](#), Oct. 2007, pp. 912 – 913, Digital Object Identifier 10.1109/LEOS.2007.4382706
27. C. Ataman, H. Urey, "Magnetic actuated FR4 scanners for compact spectrometers", *MEMS-MOEMS and Micromachining III*, H. Urey, Chair, Strasbourg-France, April 2008. Proc. SPIE, Vol. 6993, 699303 (2008); DOI:10.1117/12.785375.
28. M. Sayinta, S. O. Isikman, H. Urey, "Scanning Led Array Based Volumetric Display", *3DTV Conference: The True Vision - Capture, Transmission and Display of 3D Video*, 2008, Istanbul, Turkey, pp. 21 – 24, Digital Object Identifier 10.1109/3DTV.2008.4547798
29. A. Arslan, C. Ataman, S. Holmstrom, K. Hedsen, P. Enoksson, H.R. Seren, H. Urey, "Mechanically coupled comb drive MEMS stages," *IEEE Optical MEMS and Nanophotonics*, Freiburg, Germany, p. 140-141, 2008, DOI 10.1109/OMEMS.2008.4607868
30. H. I. Ocakli, A. Ozturk, N. Ozber, H. Kavakli, E. Alaca, H. Urey, "Resonant cantilever bio sensor with integrated grating readout," *IEEE Optical MEMS and Nanophotonics*, Freiburg, Germany, p. 46-47, 2008, Digital Object Identifier 10.1109/OMEMS.2008.4607821
31. Ozber, N., A. Ozturk, H. I. Ocakli, H. Urey, I. H. Kavakli ve B. Erdem Alaca, "Functionalization of his-tagged human kappa opioid receptor on the gold surface of cantilever array", *Proceedings of the IASTED International*

- Conference on Nanotechnology and Applications (NANA 2008), Crete, Greece, IASTED, p.33-36, September 29 – October 1, 2008
32. M. F. Toy, O. Ferhanoglu, H. Torun, F. L. Degertekin, H. Urey “MOEMS thermal imaging camera,” Research in Microelectronics and Electronics, 2008. PRIME 2008. Ph.D., Istanbul, Turkey, 2008, pp. 101-104, Digital Object Identifier 10.1109/RME.2008.4595
  33. H. Seren, H. Urey, “Optical Sensor for Micro and Nano Mechanical System Characterization,” Eurosensors XXII, p. 1292-1295, Dresden, Germany, 2008
  34. M. F. Toy, O. Ferhanoglu, O. Akar, T.Akin, H. Urey, “Uncooled Infrared Thermomechanical Detector Array with Integrated Diffraction Grating for Imaging Applications; Design, Fabrication and Testing” Eurosensors XXII, p. 629-631, 2008, Dresden, Germany, 2008
  35. M. Sayinta, A. Arslan, H. Suyal, M. Taghizadeh, H. Urey, “Polymer waveguide and LED array integration on FR4 scanner,” Micro-Optics Conference MOC 2008, Brussels, 2008
  36. K. Hedsten, C. Ataman, S. Holmstrom, P. Enoksson, H. Urey, "Hot Embossed Microoptics in Silicon Micromachining Using a Substrate Bonder," Micromechanics Europe, September 28-30, 2008, Aachen, Germany
  37. H. Urey, S. Isikman, S. Holmstrom, “MEMS and FR4 Scanners for Microdisplay and Imaging Applications (Invited Paper),” ICMEMS Conference, Chennai, India, Jan 2009
  38. Siva Konduri, Srijita Patra, Erdem Alaca, Hakan Urey, ”Micro Cantilever Sensing in Liquid Environment with Self-oscillation and Amplified Quality Factor,” ICMEMS Conference, Paper: OM-O1, Chennai, India, Jan 2009
  39. O. Ferhanoglu, M.F. Toy, H. Ürey, “Parylene based Uncooled Thermomechanical Array”, Proc. SPIE, Vol. 7298, 72980H; DOI:10.1117/12.818951, Orlando, USA, April 2009
  40. Aslihan Arslan , Dean Brown, Wyatt O.Davis, Sven Holmstrom, Sertan Kutal Gokce, Hakan Urey, ‘Comb- Actuated Resonant Torsional Scanner for Microdisplays’, IEEE/LEOS International Conference on Optical MEMS and Nanophotonics, Page(s):139-140, Clearwater, FL, USA, 2009.
  41. Sertan Kutal Gokce, Sven Holmstrom, Caglar Ataman, Aslihan Arslan, Huseyin R. Seren, Hakan Urey, ‘2D Scanning MEMS Stage Integrated with Microlens Arrays for High-Resolution Beam Steering’, IEEE/LEOS International Conference on Optical MEMS and Nanophotonics, Page(s):43-44, Clearwater, FL, USA, 2009.
  42. Sertan Kutal Gokce, Sven Holmstrom, Cyrille Hibert, Caglar Ataman, Aslihan Arslan, Huseyin R. Seren, Hakan Urey, ‘MEMS Stage Integrated with Microlens Arrays for High-Resolution Beam Steering’, Procedia Chemistry, Volume 1, Issue 1 & Proceedings of the Eurosensors XXIII conference, Lausanne, Switzerland, August 2009, Pages 1319-1322
  43. G. Hatipoglu, H. Urey, ‘FR4-based electromagnetic energy harvester for wireless tyre sensor nodes’, Procedia Chemistry, Volume 1, Issue 1 & Proceedings of the Eurosensors XXIII conference, Lausanne, Switzerland, August 2009, Pages 1211-1214
  44. S. Isikman, E. Erden, S. Varghese, F. Abdullah, R. Augustine, R. Sprague, V. Andron, H. Urey, "Self-Oscillating FR4 Laser Scanner with Integrated Dynamic Focus and Extended Imaging Range", International Symposium on Optomechatronic Technologies, p. 295-298, Istanbul, Turkey, 2009
  45. H. R. Seren, O. Ferhanoglu, G. Hatipoglu, M. Boyman, S. Olcer, C. Ataman, H. Urey, "Miniaturized FR4 Spectrometers", International Symposium on Optomechatronic Technologies, p. 158-163, Istanbul, Turkey, 2009
  46. K. V. Chellappan, E. Erden, H. Ürey, H. Baghsiahi, E. Willman, S. E. Day, D. R. Selviah, F. A. Fernandez, P. Surman, "Laser Scanning 3D Display with Dynamic Exit Pupil", Eurodisplay 2009, Rome, Italy, pp. 492-495, September 2009
  47. O. Ferhanoglu, H.R. Seren, H. Urey, "Lamellar Grating Interferometer based compact FT Spectrometers", IEEE Leos Annual Meeting Proc. Vol. I and II, Antalya, Turkey, pp. 326-327, Oct 2009
  48. E. Erden, K. V. Chellappan, H. Ürey, H. Baghsiahi, E. Willman, S. E. Day, D. R. Selviah, F. A. Fernandez, P. Surman, "Laser Scanning Based Autostereoscopic 3D Display with Pupil Tracking", IEEE LEOS Annual Meeting Proc. Vol. I and II, Antalya, Turkey, pp. 10-11, Oct 2009
  49. (Invited Paper) H. Urey and H. Seren, “MEMS Stages and Scanners for Display, Imaging, and Spectroscopy and Their Dynamic Characterization,” Asian Conference on Experimental Mechanics, ICEM 2009, Singapore, Nov 2009
  50. E. Willman, H. Baghsiahi, F. A. Fernández, D. R. Selviah, S. E. Day, V. C. Kishore, E. Erden, H. Urey, and P. A. Surman, “The Optics of an Autostereoscopic Multiview Display,” Digest of SID Annual Meeting, Paper: 16.4, pp. 222-225, Seattle, USA, May 2010
  51. E. Timurdogan, S. Nargul, S. Yavuz, H. Urey, I. H. Kavakli, E. Alaca, “Detection of Hepatitis A antigen by micro-cantilever-array-based integrated optical system “, BIOSENSORS 2010, Glasgow, UK, May 2010
  52. E. Timurdogan, S. Yavuz, S. Nargul, H. Urey, I. H. Kavakli, E. Alaca, “Thin Film Magnetic Actuation of a Resonant MEMS Nano-Biosensor and its applications in Liquid”, SMA Workshop 2010, Istanbul, Turkey, June 2010

53. H. Urey, E. Timurdogan, S. Yavuz, I. H. Kavakli, E. Alaca, "Resonant Nano-Biosensor for Multi-Analyte Screening using optical MEMS", NANOTR6, Izmir / Turkey, June 2010
54. E. Timurdogan, H. Urey, "Ferromagnetic Thin Film Cantilevers For Sensor Arrays", EMSA 2010, Bodrum / Turkey, July 2010
55. E. Timurdogan, S. Nargul, I. H. Kavakli, E. Alaca, H. Urey, "Magnetic Actuated MOEMS Resonant Biosensor Array", IEEE Optical MEMS and Nanophotonics, Sapporo, Japan, August 2010
56. H. R. Seren, N. P. Ayerden, J. Sharma, S. T. Holmström, T. Sandner, T. Grasshoff, H. Schenk, H. Urey, "Lamellar grating based Fourier transform spectrometer", IEEE Optical MEMS and Nanophotonics, Sapporo, Japan, August 2010
57. E. Uzunlar, M. S. Kilic\*, B. E. Alaca, H. Urey, and C. Erkey, "Frequency response of microcantilevers in supercritical CO<sub>2</sub>", in 12th European Meeting on Supercritical Fluids, (Graz, Austria, May 9-12, 2010).
58. H. Urey, E. Timurdogan, E. Ermek, I.H. Kavakli, B.E. Alaca, "MEMS Biosensor for Parallel and Highly Sensitive and Specific Detection of Hepatitis", IEEE MEMS 2011, Cancun, Mexico, pp. 920-923, January 2011
59. H. Baghsiahi, D. Selviah, E. Willman, A. Fernández, S. Day, K. Akşit, S. Ölçer, A. Mostafazadeh, E. Erden, V. Kishore "Beam Forming for a Laser Based Auto-stereoscopic Multi-Viewer Display," SID Annual Meeting, paper no: 48.4, Seattle, USA, June 2011
60. K. Akşit, S. Ölçer, E. Erden, V. Kishore, H. Urey, E. Willman, H. Baghsiahi, S. Day, D. Selviah, and F. Anibal Fernández, "Light engine and optics for HELIUM3D auto-stereoscopic laser scanning display," in 3DTV Conference: The True Vision-Capture, Transmission and Display of 3D Video (3DTV-CON)", (IEEE), pp. 1–4, Antalya, Turkey, May 2011
61. N. P. Ayerden, S. Holmstrom, H. R. Seren, S. Olcer, J. Sharma, S. Luetjohann, T. Sandner, H. Urey, "MEMS Fourier Transform IR Spectrometer," IEEE Optical MEMS and Nanophotonics, Istanbul, Turkey, pp. 11-12, August 2011.
62. S. K. Gokce, S. Holmstrom, D. Brown, W. O. Davis, H. Urey, "A High-Frequency Comb-Actuated Resonant MEMS Scanner for Microdisplays," IEEE Optical MEMS and Nanophotonics, Istanbul, Turkey, pp. 35-36, August 2011
63. U. Baran, W. O. Davis, S. Holmström, D. Brown, J. Sharma, S. K. Gokce, H. Urey, "MEMS Rotary Stage with Linear Stiffness," IEEE Optical MEMS and Nanophotonics, Istanbul, IEEE Optical MEMS and Nanophotonics, Istanbul, Turkey, pp. 37-38, August 2011.
64. H. R. Seren, N. P. Ayerden, S. Holmstrom, H. Urey, "MEMS Fourier Transform Spectrometer," XXX General Assembly and Scientific Symposium of the International Union of Radio Science, Istanbul, Turkey, August 2011.
65. U. Baran, K. Hedili, S. Olcer, H. Urey, "FR4 Electromagnetic Scanner Based Fourier Transform Spectrometer", Proceedings of the ASME 2011 International Design Engineering Technical Conferences & Computers and Information in Engineering Conference, Washington DC, USA, pp. xx-yy, August 28-31
66. U. Baran, D. Brown, S. Holmstrom, D. Balma, W. O. Davis, A. Mazzalai, P. Muralt, and H. Urey, "High frequency torsional MEMS scanner for displays," in Proc. IEEE MEMS, Paris, France, Jan. 2012, pp. 636–639.
67. S. Z. Lulec, C. Sagiroglu, A. Mostafazadeh, E. Ermek, E. Timurdogan, and Y. Leblebici, H. Urey, "Simultaneous self-sustained actuation and parallel readout with MEMS cantilever sensor array," in Proc. IEEE MEMS, Paris, France, Jan. 2012, pp. 644-647.
68. M. K. Hedili, M. O. Freeman, H. Urey, [Microstructured head-up display screen for automotive applications](#), Proc. SPIE, 8428, p. 22, Brussels, Belgium, April 2012
69. N.P. Ayerden, J. L. Stehle, S. Holmström, and H. Urey, "MEMS FTIR Spectrometer and Optical Results" in Optical Proc. IEEE/LEOS Int. Conf. Opt. MEMS Nanophoton., Banff, Alberta, Canada, pp. 6-9, Aug. 2012.
70. O. Cakmak, C. Elbuken, E. Ermek, S. Bulut, T. Sandner, Y. Kilinc, I. Baris, H. Kavakli, E. Alaca, H. Urey, "Mems Biosensor For Blood Plasma Viscosity Measurements", European Congress on Biotechnology, Istanbul, Turkey, September 2012.
71. K. Akşit, O. Eldeş, S. Viswanathan, M. Freeman and H. Urey, "Mixed Polarization 3D Technique for Scanned Laser Pico Projector Displays," in Proc. IMID2012, 2012, SID/KIDS, Daegu, Korea, Aug. 2012.
72. K. Akşit, O. Eldeş, and H. Urey, "Multiple Body Tracking for Interactive Mobile Projectors," in IMID2012 conference, 2012, SID/KIDS, Daegu, Korea, Aug. 2012.
73. (Invited) H. Urey, 3D displays, Photonics 2012, Chennai, India, Dec. 2012
74. R. B. Erarslan, S. Z. Lulec, U. Adiyani, S. Olcer, Y. Temiz, Y. Leblebici, H. Torun, and H. Urey, "MEMS sensor array platform integrated with cmos based optical readout, IEEE MEMS Conference, Taipei, Taiwan, Jan. 2013

### National Conference Presentations

- Zafer Urey, Nathan J.Gomes, Phillip A.Davies, and Hakan Urey, "Optoelectronic Mixing at 1300nm: Performance Comparison of an InGaAs/InP Heterojunction FET and an InGaAs PIN Photodiode," Proc. Bilkent Int. Conf. on Lightwave Technology and Communications, pp. 102-108, Ankara, Turkey, 27-28 July 1992.
- Hakan Urey, "Micro-Elektro-Mekanik Sistem (MEMS) Teknolojisi Kullanan Optik Tarayıcılar ve Uygulamaları," (in Turkish, presentation only), 4. Ulusal Elektro-Optik Çalışma Toplantısı, UME, Gebze, Turkey, Dec 2002
- Çağlar Ataman, Hakan Urey, "MEMS mikrotarayıcı tasarımı ve dinamik karakterizasyonu," (in Turkish, presentation only), 5. Ulusal Elektro-Optik Çalışma Toplantısı, ODTU, Ankara, Dec 2003
- Hakan Urey, Cihan Kan, "FEM Based Modal Analyses of High Frequency Microoptical Scanners with ANSYS," FIGES Kullanıcılar Toplantısı, Pages: 162-170, İstanbul, Oct 2003
- Cihan Kan and Hakan Urey, "FEM Based Modal Analyses of High Frequency Microoptical Scanners with ANSYS," FIGES Kullanıcılar Toplantısı, İstanbul, Türkiye, p. 70-78, Oct. 2003
- Hamdi Torun, Çağlar Ataman, Hakan Ürey, "Optik Yöntemler ile Dinamik MEMS Karakterizasyonu," 6. Ulusal Elektro-Optik ve Fotonik Çalışma Toplantısı, Sabancı Univ, İstanbul, Dec 2004
- Arda D. Yalçınkaya, Olgaç Ergeneman, Hakan Ürey, "Elektro-manyetik Tahrikli Polimer Bazlı Optik Tarayıcı," 6. Ulusal Elektro-Optik ve Fotonik Çalışma Toplantısı, Sabancı Univ, İstanbul, Dec 2004
- MEMS Microscanners For Aerospace Applications, Çağlar Ataman, Cihan Kan, Hakan Urey, RAST 2005 Recent Advances in Space Technologies, June, 2005, İstanbul
- H. Urey, C. Kan, C. Ataman, RAST2005 (presentation only)
- C. Kan, H. Urey, Vibration conference ISIK Univ. ISOCV Vibration Analysis Conference
- Ata Akatay, Çağlar Ataman, Hakan Ürey, "Mikromercek Dizimleri ile Yüksek Çözünürlüklü Lazer Tarayıcı" 7. Ulusal Elektro-Optik ve Fotonik Çalışma Toplantısı, Bilkent Univ, İstanbul, Dec 2005
- Çağlar Ataman, Hakan Ürey, "Görünür ve Yakın Kızılötesi için MEMS Temelli Fouier Dönüşümü Tayföçeri," 7. Ulusal Elektro-Optik ve Fotonik Çalışma Toplantısı, Bilkent Univ, Ankara, Dec 2005.
- A. D. Yalçınkaya, S. Holmstrom, H. Ürey "İnce Manyetik Film Kaplamalı İki Boyutlu Manyetik Mikrotarayıcı", 8. Ulusal Fotonik Çalıştay, Koç Univ, İstanbul, Sep 2006.
- O. Ferhanoğlu, M. F. Toy, H. Torun, H. Ürey, "Optik Okumalı Soğutmasız Kızılötesi Dedektör", 8. Ulusal Fotonik Çalıştay, Koç Univ, İstanbul, Sep 2006
- Ç. Ataman, H. Ürey "Mikro-mekanik ve Polimer Tarayıcılar Kullanarak Fourier Dönüşümü Tayföçeri Geliştirilmesi", 8. Ulusal Fotonik Çalıştay, Koç Univ, İstanbul, Sep 2006
- A. Arslan, H. Ürey, "Maskesiz Litografi Düzenegi ile Polimer Malzeme İşlenmesi," 9. Ulusal Fotonik Çalıştay, Aselsan, Ankara, Sep 2007
- M. F. Toy, O. Ferhanoğlu, G. Ünal, G. Kabuli, A. U. Çalışkan, H. Ürey, "Optik okumalı soğutmasız termo-mekanik dedektör dizini," 9. Ulusal Fotonik Çalıştay, Aselsan, Ankara, Sep 2007
- S. O. Isikman, H. Ürey, "Manyetik İnce Filmler ile Tahriklenen Lazer Tarayıcı," 9. Ulusal Fotonik Çalıştay, Aselsan, Ankara, Sep 2007
- B. E. Alaca, H. Urey, and I. H. Kavaklı, "Resonator-based biosensors", 13th Biomedical Science & Technology Symposium, 27, Yeditepe Üniversitesi, İstanbul, 2007.
- H. I. Ocaklı, A. Öztürk, S. Holmström, N. Özber, O. Ferhanoglu, I. H. Kavaklı, H. Ürey, and B. E. Alaca, "A resonator-based mass detector: sensing of biological species", Nanoscience Nanotechnology Nanobiotechnology Nanomedicine Conference, NanoTR-III, 8, Bilkent Üniversitesi, Ankara, 2007.
- Ocaklı, H. I., A. Ozturk, B. E. Alaca, H. Urey, N. Ozber ve I. H. Kavaklı, "Resonant mass sensor with integrated optical readout for biological applications" 4. Ulusal Nanobilim ve Nanoteknoloji Konferansı, NanoTR4, İTÜ, İstanbul, Poster: 179, 09-13 Haziran 2008.
- Ozturk, A., H. I. Ocaklı, N. Ozber, H. Urey, I. H. Kavakli ve B. E. Alaca, "Mikro çinlaçların biyolojik algılayıcılardaki uygulamaları", 13. Biyomedikal Mühendisliği Ulusal Toplantısı, BIYOMUT 08, ODTÜ, Ankara, 29-31 Mayıs 2008
- M. F. Toy, O. Ferhanoğlu, O. Akar, T. Akın, H. Ürey, "Soğutmasız Kızılötesi Termomekanik Algılayıcı Tasarımı, Üretimi ve Testi," 10. Ulusal Fotonik Çalıştay, Kocaeli Üniversitesi, Kocaeli, Oct 2008
- H. Seren, H. Ürey, "Mikrosistem Karakterizasyonu için Optik Algılayıcı Düzenegi", 10. Ulusal Optik Elektro-Optik ve Fotonik Çalıştay, Kocaeli Üniversitesi, Kocaeli, Ekim,2008
- A. Arslan, H. Urey, ""10. Ulusal Optik Elektro-Optik ve Fotonik Çalıştay, Kocaeli Üniversitesi, Kocaeli, Ekim, 2008

- A. Ozturk, H. I. Ocaklı, N. Ozber, H. Urey, I. H. Kavakli, and B. E. Alaca, "Mikro çınlaçların biyolojik algılayıcılardaki uygulamaları", 13. Biyomedikal Mühendisliği Ulusal Toplantısı, BIYOMUT 08, ODTÜ, Ankara, May 29-31, 2008.
- O. Ferhanoğlu, M. F. Toy, O. Akar, T. Akın, O. O. Cellek, H. Ürey, "Soğutmasız Kızılötesi MEMS Termomekanik Görüntüleme" 11. Ulusal Optik Elektro-Optik ve Fotonik Çalıştayı, ODTÜ, Ankara, 2009
- E. Erden, K. V. Chellappan, H. Ürey, H. Baghsiahi, E. Willman, S. E. Day, D. R. Selviah, F. A. Fernandez, P. Surman, "Lazer Tarama Temelli 3 Boyutlu Görüntüleme Sistemi", 11. Ulusal Optik Elektro-Optik ve Fotonik Çalıştayı, ODTÜ, Ankara, Ekim, 2009
- Sertan Kutal Gökçe, Sven TS Holmstrom, Cyrille Hibert, Çağlar Ataman, Aslıhan Arslan, Hüseyin R. Seren, Hakan Urey, "MEMS ile Entegre Mikrolens Dizinleri Kullanarak Lazer Kamera Geliştirilmesi", 11. Ulusal Optik Elektro-Optik ve Fotonik Çalıştayı, ODTÜ, Ankara, Ekim, 2009
- M. S. Kilic, B. E. Alaca, S. Yavuz, and H. Urey, "Kompozit konsol kiris yapıların mikro-çınlaç olarak kütle ölçümünde kullanımı", XVI. Ulusal Mekanik Kongresi, 815-822, Erciyes Üniversitesi, Kayseri, 2009.
- H. Urey, E. Timurdoğan, S. Yavuz, H. Kavakli, and B. Erdem Alaca, "Resonant nano-biosensor for multi-analyte screening using optical MEMS", 6th Nanoscience and Nanotechnology Conference, NanoTR-VI, 106, Çesme, Izmir, June 15-18, 2010.
- H. Urey, "Biosensor for multianalyte detection using Optical MEMS," Nanomedicine, Antalya, Turkey, Oct 2010
- Y. Kilinc, E. Timurdoğan, E. Ermek, C. Sagiroglu, I. Baris, A. Mostafazadeh, I. H. Kavakli, H. Urey ve B. E. Alaca "Operation of Micromechanical Resonator Biosensor in Liquid Media," 7<sup>th</sup> Nanoscience and Nanotechnology Conference, NanoTR-VII, p. S2-J.2, Sabancı Üniversitesi, İstanbul, June 27- July 1, 2011