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**Date and Place of Birth:** April 10<sup>th</sup>, 1969, İzmir, TURKEY.

## 1.1 Educational Background

- January 1993 - August 1995: Ph.D. student  
Department of Electrical Engineering, Ohio State University, Columbus OH.  
Ph.D. degree in Electrical Engineering, August 1995.  
M.S. degree in Mathematics, August 1994.
- September 1991 - December 1992: M.S. student  
Department of Electrical Engineering, Ohio State University, Columbus OH.  
M.S. degree in Electrical Engineering, December 1992.
- September 1990 - June 1991: M.S. student  
Department of Electrical Engineering, Boğaziçi University, Istanbul, Turkey.
- September 1985 - June 1990: B.S. Student  
Department of Electrical Engineering, Boğaziçi University, Istanbul, Turkey.  
B.S. in Electrical Engineering, June 1990,  
B.S. in Mathematics, June 1990,  
B.S. in Physics, June 1990.  
(First student in the University history to complete 3 majors in 4.5 years).

## 1.2 Employment History

- September 2004 - present: Associate Professor, Fatih University, Electronics Engineering Department, Istanbul, TURKEY (Received the "Associate Professor" title on October, 2006).
- June 2004 - August 2004: Associate Professor, College of Computer Sciences and Engineering, Systems Engineering Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.
- September 1997- June 2004: Assistant Professor, College of Computer Sciences and Engineering, Systems Engineering Department, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.  
January 1998- January 2000: Part time software engineer and consultant for Teknobil Inc., Istanbul, TURKEY (<http://www.teknobil.com.tr>).
- April 1996-August 1997: Post-Graduate Researcher, Department of Electrical Engineering, University of California, Riverside, CA.
- September 1995 - March 1996: DISC PostDoctoral Fellow, Eindhoven University of Technology, Eindhoven, The Netherlands.
- September 1994 - August 1995: Graduate Fellow, Ohio State University, Columbus, OH.
- July 1994 - August 1994: Research Assistant, Department of Electrical Engineering, Ohio State University, Columbus, OH.

- April 1994 - June 1994: Teaching Assistant, Department of Electrical Engineering, Ohio State University, Columbus, OH.
- April 1992 - March 1994: Research Assistant, Department of Electrical Engineering, Ohio State University, Columbus, OH.
- September 1991 - March 1992: Teaching Assistant, Department of Electrical Engineering, Ohio State University, Columbus, OH.
- September 1990 - June 1991: Research Assistant, Department of Electrical Engineering, Boğaziçi University, Istanbul, Turkey.

## 1.3 Research Interests

- Embedded systems
- Fiber Optic Sensors
- Telerobotics, Stereo Visualization, Augmented Reality
- Robust Control, System Identification, Flexible Structures, Complexity Theory

## 1.4 Citations

More than 200 citations listed in the "ISI Web of Science" citation database (This number excludes self citations and citations by co-authors).

## 2.1 Publications

### Book Chapters

1. C. Ulas, O. Toker, and K. Fidanboylyu, "Rotation Angle Estimation Algorithms for Textures and Their Implementations on Real Time Systems," to appear in "Machine Vision," ISBN 978-953-307-902-8.
2. O. Toker, "Open problems in randomized  $\mu$  analysis," *Unsolved problems in Mathematical Systems and Control Theory*, V. D. Blondel, and A. Megretski eds., Princeton University Press, 2004.
3. O. Toker and B. Jager, "Conservatism of the standard upper bound test: Is  $\sup(\bar{\mu}/\mu)$  finite? Is it bounded by 2?," *Open Problems in Mathematical Systems and Control Theory*, Chapter 43. V. D. Blondel, E. D. Sontag, M. Vidyasagar, and J. C. Willems eds., Communications and Control Engineering, Springer-Verlag, 1999.
4. O. Toker, and H. Özbay, "On the computation of suboptimal  $\mathcal{H}^\infty$  controllers for unstable infinite dimensional systems," *Robust Control Theory*, Chapter 6. B. A. Francis and P. P. Khargonekar eds., IMA Volumes in Mathematics and its Applications, Springer-Verlag, 1995.

### Journal Articles

1. O. Toker, and H. Özbay, " $\mathcal{H}^\infty$  Optimal and suboptimal controllers for infinite dimensional SISO plants," *IEEE Transactions on Automatic Control*, vol. 40 (1995), pp. 751–755.
2. O. Toker, and H. Özbay, "Gap Metric Problem for MIMO Delay Systems: Parameterization of all suboptimal controllers," *Automatica*, vol. 31 (1995), pp 931–940.
3. C. Gu, O. Toker, and H. Özbay, "On the Two-Block  $\mathcal{H}^\infty$  Problem for a Class of Unstable Distributed Systems," *Linear Algebra and its Applications*, vol. 234, February 1996, pp. 227-244.
4. O. Toker, "On the order of simultaneously stabilizing compensators," *IEEE Transactions on Automatic Control*, vol. 41 (1996), pp. 430-433.

5. O. Toker, and H. Özbay, "On the Rational  $\mathcal{H}^\infty$  Controller Design for Infinite Dimensional Plants," *International Journal of Robust and Nonlinear Control* (special issue on robust and  $\mathcal{H}^\infty$  control of infinite dimensional systems), vol. 6 (1996), pp. 383-397.
6. O. Toker, and H. Özbay, "Complexity issues in robust stability of linear delay-differential systems," *Mathematics of Control, Signals, and Systems*, vol. 9 (1996), pp. 386-400.
7. O. Toker, "On the complexity of the robust stability problem for linear parameter varying systems," *Automatica*, vol. 33, No.11, November 1997, pp. 2015-2017.
8. O. Toker, and H. Özbay, "On the  $\mathcal{NP}$ -hardness of the purely complex  $\mu$  computation, analysis/synthesis, and some related problems in multidimensional systems," *IEEE Transactions on Automatic Control*, vol. 43 (1998), pp. 409-414.
9. O. Toker, and J. Chen, "On computational complexity of invalidating structured uncertainty models," *Systems & Control Letters*, vol. 33 (1998), pp. 199-207.
10. O. Toker, "On the algorithmic unsolvability of some stability problems for hybrid systems," *IEEE Transactions on Automatic Control*, vol. 45 (2000), pp. 165-168.
11. J. Chen, L. Qiu, and O. Toker, "Limitations on Maximal Tracking Accuracy," *IEEE Transactions on Automatic Control*, vol. 45 (2000), pp. 326-331.
12. O. Toker, J. Chen, and L. Qiu, "Tracking performance limitations in LTI multivariable discrete-time systems," *IEEE Transactions on Circuits and Systems, I*, vol. 49 (2002), pp. 657-670.
13. O. Toker, "Conservatism of Randomized Structured Singular Value," *IEEE Transactions on Automatic Control*, vol. 47 (2002), pp. 2113-2116.
14. O. Toker, and H. Shabaik, "Pseudorandom Multilevel Sequences:Spectral Properties and Identification of Hammerstein Systems," *IMA Journal of Mathematical Control and Information* (2004) **21**, pp. 183-205.
15. M. Al-Mouhamed, O. Toker, and A. Al-Harthy, "A 3D Vision-Based Man-Machine Interface For Hand-Controlled Telerobot," *IEEE Transactions on Industrial Electronics*, vol. 52 (2005), pp. 1-15.
16. R. Fan, L. Cheded, and O. Toker, "Designing a SCADA system powered by Java and XML," *IEE Computing and Control Engineering*, Volume 16, Issue 5, Oct.-Nov. 2005.
17. R. Fan, L. Cheded, and O. Toker, "Java plus XML: A powerful new combination for SCADA systems," *IEE Computing and Control Engineering*, Volume 16, Issue 5, Oct.-Nov. 2005.
18. R. Fan, L. Cheded, and O. Toker, "Internet Based SCADA: A new approach using JAVA and XML," *IEE Computing and Control Engineering*, Volume 16, Issue 5, Oct.-Nov. 2005.
19. O. Toker, and M. Sunar, "Substructural multiobjective  $H_\infty$  controller design for large flexible structures: A divide and conquer approach based on linear matrix inequalities," *Journal of Systems and Control Engineering, Proceedings of the Institution of Mechanical Engineers Part I*, Volume 219, Number 5 (2005) pp. 319-334.
20. M. Al-Mouhamed, O. Toker, and A. Iqbal, "A Multi-Threaded Distributed Telerobotic Framework," *IEEE Transactions on Mechatronics*, vol. 11 (2006), pp. 558-566.
21. M. Sunar, and O. Toker, "Substructural control of fuzzy nonlinear flexible structures," *Journal of the Franklin Institute - Engineering and Applied Mathematics*, 344, (2007), pp. 646-657.
22. O. Toker, "The Kharitonov Theorem with Degree Drop : The Complex Case," *IMA Journal of Mathematical Control and Information*, 25, (2008), pp. 507-514.
23. H. S. Efendioglu, M. E. Esen, O. Toker, K. Fidanboyulu, "Stress measurement with fiber optical sensors using modal power distribution: A comparison of power-meter and CCD camera techniques," *Optics and Lasers in Engineering*, (2010), pp. 453-456.

24. O. Toker, "A Kharitonov like Theorem for Robust Stability Independent of Delay of Interval Quasipolynomials," *International Journal of Robust and Nonlinear Control*, 20, (2010), pp. 623-638.
- (Non-SCI) C. Ulaş, H. S. Efendioğlu, O. Toker, and H. Gümüşkaya, "Delay Sensitive Wireless Protocols for Telerobotics Applications," *Journal of Networking Technology*, 1, (2010), pp. 118-125.
25. H. S. Efendioğlu, M. E. Esen, O. Toker, K. Fidanboyu, "Optimal Design of MPD Based Fiber Optic Strain Sensors and Comparison of Power-Meter and CCD Camera Measurements," *Optical Fiber Technology*, 17, (2011), pp. 91-97.
26. S. Yılmaz, O. Toker, N. Arslan, H. Sedef, "Optimal in-vitro realization of pulsatile coronary artery flow waveforms using closed-loop feedback algorithms with multiple flow control devices," to appear in *Turkish Journal of Electrical Engineering & Computer Sciences*.

Papers in International Conference Proceedings

1. N. Arslan, S. Yılmaz, O. Toker, H. Sedef, "Realization of Pulsatile Coronary Artery Flow Waveforms using Close-Loop Feedback Algorithms with Flow Control Devices and Parametric Identification," accepted for the 33<sup>th</sup> Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC'11), Boston, MA, USA.
2. H. İ. Çakar, S. Kara, O. Toker, "A Wireless Surface Electromyography System Design for Lumbar Disc Herniated Patients," IEEE International Symposium on Medical Measurements and Applications 2011, Bari, Italy, April 2011.
3. O. Toker, H. S. Efendioğlu, M. E. Eşen, K. Fidanboyu, "Optimal Design of MPD based fiber optic strain sensors and comparison of power-meter and CCD camera based architectures," Smart Structures/NDE 2011, San Diego, CA, USA, March 2011, Proc. of SPIE, 7981.
4. H. S. Efendioğlu, T. Yildirim, O. Toker, "Advanced image processing and artificial intelligence based approaches to fiber optic statistical mode sensor design," Smart Structures/NDE 2011, San Diego, CA, USA, March 2011, Proc. of SPIE, 7982.
5. C. Ulaş, H. S. Efendioğlu, O. Toker, and H. Gümüşkaya, "Delay Sensitive Wireless Protocols for Telerobotics Applications," The Third International Conference on the Applications of Digital Information and Web Technologies (ICADIWT 2010), Istanbul, TURKEY, (2010), pp. 10-16.
6. H. İ. Çakar, S. Kara, O. Toker, "Design of a Portable Electromyography Device for Back Herniated Patients," Biomedical Engineering Systems and Technologies International Joint Conference, BIOSTEC, Biodevices 2010 - the International Conference on Biomedical Electronics and Devices, Valenci, SPAIN, (2010).
7. O. Toker, C. Ulaş, H. S. Efendioğlu, and H. Gümüşkaya, "Embedded Systems for Delay Sensitive Wireless Protocol Development and Analysis for Telerobotics Applications," Int. Conf. on Wireless Networks 2009 (ICWN'09), Las Vegas, NV, USA, (2009), pp. 487-491.
8. K. Fidanboyu, H. S. Efendioğlu, O. Toker, M. E. Eşen, "Detection of Cracks and Damages in Concrete and Historical Buildings Using Fiber Optic Sensors," 5th International Advanced Technologies Symposium, Karabuk, TURKEY, (2009), pp. 176-181.
9. Z. Çatmakaş, İ. H. Köse, O. Toker, H. R. Öz, "Towards an ARM based low cost and mobile biomedical device testbed," 4<sup>th</sup> European Conference of the Int. Federation for Medical and Biological Engineering, Antwerp BELGIUM, November 2008, IFMBE Proceedings, 22, pp. 1108-1112.
10. C. Ulaş, S. Demir, O. Toker, and K. Fidanboyu, "Rotation Angle Estimation Algorithms for Textures and Their Real-Time Implementation on the FU-SmartCam," 5th International Symposium on Image and Signal Processing and Analysis, Istanbul, TURKEY, (2007), pp. 469-475.
11. M. T. Nalcaci, A. E. Sonmez, M. A. Pazarbasi, O. Toker, K. Fidanboyu, "Design and implementation of a Bluetooth based infant monitoring/saver (BIMS) system," SPIE 14th International Symposium on Smart Structures and Materials & Nondestructive Evaluation and Health Monitoring, March 18-23, 2007, San Diego, CA, USA

12. M. Al-Mouhamed, O. Toker, A. Iqbal, and S. Islam, "Evaluation of Real-Time Delays for Networked Telerobotics," 3rd IEEE International Conference on Industrial Informatics, 2005, pp. 351-356.
13. O. Toker, and M. Sunar, "A Substructural control technique by  $H_\infty$  method for nonlinear and fuzzy structures," Proceedings of 2nd International Conference on Recent Advances in Space Technologies, 2005 (RAST 2005), June 9-11, 2005, pp. 298-303.
14. R. Fan, L. Cheded, O. Toker, and M. El-Shafei, "An XML Web Services Approach to SCADA Systems Design," IEEE-GCC 2004, Bahrain.
15. R. Fan, O. Toker, and L. Cheded, "Design of an Internet-based SCADA System and its Application to the Process Control Industry," International Conference on Information & Computer Science (ICICS 2004), KFUPM, Dhahran, Saudi Arabia.
16. O. Toker, and S. C. Nassif, "Design of a Mechatronics Oriented Multi-port Vision Subsystem: KFUPM-CAM," Mechatronics 2004, 9th Mechatronics Forum. International Conference, Ankara, TURKEY.
17. M. Al-Mouhamed, O. Toker, A. Iqbal, and M. Nazeeruddin, "A Distributed Framework for Relaying Stereo Vision for Telerobotics," IEEE/ACS International Conference on Pervasive Services, 2004 (ICPS 2004), July 19-23, 2004, pp. 221-225.
18. O. Toker, and F. Al-Sunni, "Design and Implementation of a Java Based Distributed Control System over The Internet: A Tele-Laboratory System" Proceedings of the *Internet Computing, 2003*, Las Vegas, NV, USA, June 2003, pp.886-892.
19. M. Al-Mouhamed, O. Toker, and A. Iqbal, "Design of a Multi-Threaded Distributed Telerobotic Framework," Proceedings of the *10th IEEE Inter. Conf. On Electronics, Circuits and Systems*, United Arab Emirates, 2003 (ICECS 2003), Dec. 14-17, 2003, pp. 1280-1283.
20. M. Al-Mouhamed, O. Toker, and A. Iqbal, "Performance Evaluation of a Multi-Threaded Distributed Telerobotic Framework," Proceedings of the *10th IEEE Inter. Conf. On Electronics, Circuits and Systems*, United Arab Emirates, 2003 (ICECS 2003), Dec. 14-17, 2003, pp. 1284-1287.
21. M. Al-Mouhamed, O. Toker, and A. Al-Harthy, "A 3D Vision-Based Man-Machine Interface For Hand-Controlled Telerobot," *IFAC International Conference on Intelligent Control Systems and Signal Processing*, sponsored by IEEE, IFSA, and EVONET, Faro, Portugal, April 8-11, 2003, pp. 586-591.
22. O. Toker, and J. Chen, "Asymptotic Tracking Performance of Sampled-Data Systems," Proceedings of the *American Control Conference*, 2002, Alaska, USA, pp. 2967-2972.
23. O. Toker, and M. Sunar, "Substructural Multiobjective  $H_\infty$  Controller Design for Large Flexible Structures: A Linear Matrix Inequalities (LMI) Approach," Proceedings of the *ASME Conference "Engineering Systems Design and Analysis (ESDA) 2002"*, Istanbul TURKEY, July 2002.
24. M. Sunar, S. A. Al-Kaabi, and O. Toker, "Substructural Control of Nonlinear Structures Using LQG Control," Proceedings of the *ASME Conference "Engineering Systems Design and Analysis (ESDA) 2002"*, Istanbul TURKEY, July 2002.
25. O. Toker, and M. Nazeeruddin, "Traffic Balancing on Parallel Networks," Proceedings of the *1999 SCS Symposium on Performance Evaluation of Computer and Telecommunication Systems*, July 11-15, 1999, Chicago, IL, USA.
26. M. Nazeeruddin, and O. Toker, " $H_2$ ,  $H_\infty$ , and mixed  $H_2/H_\infty$  Congestion Control of ATM Networks," Proceedings of the *1999 SCS Symposium on Performance Evaluation of Computer and Telecommunication Systems*, July 11-15, 1999, Chicago, IL, USA.
27. J. Al-Alwani, and O. Toker, "A Multiobjective Framework for Performance Evaluation of Priority Based Parallel Queue Balancing Policies," Proceedings of the *1999 SCS Summer Computer Simulation Conference*, July 11-15, 1999, Chicago, IL, USA.
28. O. Toker, and M. Bozyigit, "Predictive Load Balancing on Parallel Networks," Proceedings of the *International Conference on Parallel and Distributed Processing Techniques and Applications*, July 1999, Las Vegas, NV, USA.

29. M. Bozyigit, and O. Toker, "Agglomerative Clustering and mapping of Parallel Applications," *Proceedings of the International Conference on Parallel and Distributed Processing Techniques and Applications*, Las Vegas, NV, USA, July 1998, vol. 4, pp. 1614–1620.
30. B. Jager, and O. Toker, "Complexity of Input Output Selection," *Mathematical Theory of Networks and Systems*, Padova, Italy, 1998, pp. 597-600.
31. O. Toker, "General hybrid system stability problem is algorithmically unsolvable," *CIMASI'98*, Casablanca, Morocco, October 27-29, 1998, vol. 2, pp. 698-703.
32. O. Toker, J. Chen, and L. Qiu, "Limitations on optimal tracking performance of discrete-time systems," *1997 American Control Conf.*, Albuquerque, NM, USA, June 1997, pp. 3887-3891.
33. J. Chen, L. Qiu, and O. Toker, "Limitations on maximal tracking accuracy, part 2: tracking ramp and sinusoidal signals," *1997 American Control Conf.*, Albuquerque, NM, USA, June 1997, pp. 1757-1761.
34. O. Toker "On the conservatism of the upper bound tests for structured singular value analysis," *Proc. 35th Conference on Decision and Control*, Kobe, Japan, Dec. 1996, pp. 1295–1300.
35. O. Toker and J. Chen, "Time domain validation of structured uncertainty model sets," *35th IEEE Conf. on Decision and Control*, Kobe, Japan, Dec. 1996, pp. 255-260.
36. J. Chen, L. Qiu, and O. Toker "Limitations on maximal tracking accuracy, part 1: tracking step signals," *35th IEEE Conf. on Decision and Control*, Kobe, Japan, Dec. 1996, pp. 726-731.
37. G. Gu, J. Chen, and O. Toker, "Computation of  $L_2[0, h]$  induced norms," *35th IEEE Conf. on Decision and Control*, Kobe, Japan, Dec. 1996, pp. 4046-4051.
38. O. Toker, and H. Özbay, "Stability of Linear Delay-Differential systems and related complex programming problems," *Mathematical Theory of Networks and Systems*, St. Louis, MO, USA, 1996.
39. C. T. Abdallah, G. L. Heileman, and O. Toker, "On the complexity of output feedback problems," *Mathematical Theory of Networks and Systems*, St. Louis, MO, USA, 1996.
40. O. Toker, "On the algorithmic unsolvability of some stability problems for discrete event systems," *Proceedings of the IFAC Conference 1996*, June 30 - July 5, 1996, San Francisco, CA, USA, Volume J, pp. 353–358.
41. O. Toker, "On the complexity of the robust stability problem for linear parameter varying systems," *Proceedings of the IFAC Conference 1996*, June 30 - July 5, 1996, San Francisco, CA, USA, Volume H, pp. 53–57.
42. O. Toker, "On the order of simultaneously stabilizing compensators," *Proceedings of the American Control Conference*, Seattle WA, USA, June 1995, pp. 973–977.
43. O. Toker, and H. Özbay, "On the  $\mathcal{NP}$ -hardness of the purely complex  $\mu$  computation, analysis/synthesis, and some related problems in multidimensional systems," *Proceedings of the American Control Conference*, Seattle WA, USA, June 1995, pp. 447–451.
44. O. Toker, and H. Özbay, "On the  $\mathcal{NP}$ -hardness of solving bilinear matrix inequalities and simultaneous stabilization with static output feedback," *Proceedings of the American Control Conference*, Seattle WA, USA, June 1995, 2525–2526.
45. O. Toker, and H. Özbay, "Robustness analysis of controllers designed for active flutter suppression," *Proceedings of the American Control Conference*, Seattle WA, USA, June 1995, pp. 182–183.
46. O. Toker, and H. Özbay, "On the Structure of  $\mathcal{H}^\infty$  Controllers," *Proceedings of the 33rd IEEE Conference on Decision and Control*, Lake Buena Vista FL, USA, December 1994, pp. 3949–3954.
47. O. Toker, and H. Özbay, "Suboptimal Robustness in the Gap Metric for MIMO Delay Systems," *Proceedings of the American Control Conference*, Baltimore MD, USA, June 1994, pp. 3183–3187.
48. O. Toker, and H. Özbay, " $\mathcal{H}^\infty$  Controllers for unstable distributed plants," *Proceedings of 32nd IEEE Conference on Decision and Control*, San Antonio TX, USA, December 1993, pp. 1170–1175.

49. O. Toker, and H. Özbay, "Numerical Issues in Computation of  $\mathcal{H}^\infty$  Controllers for Distributed Plants," *Proceedings of The 31st Annual Allerton Conference on Communication, Control and Computing*, Monticello IL, USA, October 1993, pp. 535-544.
50. O. Toker, and H. Özbay, "On suboptimal  $\mathcal{H}^\infty$  controllers for unstable distributed plants," *Proceedings of the American Control Conference*, San Francisco CA, USA, June 1993, pp. 2160–2164.
51. O. Toker, and K. Özçaldıran, "Strong stabilization of SISO systems using singular compensators," *Proceedings of the International Symposium on Implicit and Nonlinear Systems*, South Ft. Worth TX, USA, December 1992, pp. 170-172.
52. Y. Istefanopulos, B. Sankur, I. Celasun, O. Toker, "Variational Approach to Pattern Recognition Using Higher Order Statistics," *Proceedings of The IEEE/ProRISC Symposium on Circuits, Systems and Signal Processing*, Veldhoven, The Netherlands, April 1991, pp.125-134.
53. Y. Istefanopulos, B. Sankur, I. Celasun, O. Toker, "Variational Approach to Pattern Recognition Using Third Order Moments," *Proceedings of International Signal Processing Workshop on Higher Order Statistics*, Chamrousse, France, July 10-12, 1991 pp. 203-206.

#### Papers in National Conference Proceedings

1. S. Yılmaz, N. Arslan, O. Toker, H. Sedef, "Femoral ve Koroner Atardamar MRI Görüntülerinden Kan Akış Sinyallerinin In Vitro Sistemde Oluşturulması," V. Ulusal Biyomekanik Kongresi, İzmir, TURKEY, (2010).
2. H. İ. Çakar, S. Kara, O. Toker, "Bel Fıtığı Hastalığı Analizi için Portatif Elektromiyografi Cihazı Tasarımı," 15. Biyomedikal Mhendislii Ulusal Toplantısı (BİYOMUT 2010), Antalya, TURKEY, April 2010.
3. M. S. Yıldırım, O. Toker, S. Kara, GÖMSİS 2010 Bildiri Kitabı, ISTANBUL, November 2010, pp. 85-90.
4. E. Doganay, O. Toker, S. Kara, A Güven, A. Ö Öner, "Fundus Görüntülerinden Üç FarklıYöntem ile Damarların Çıkarılması," BİYOMUT 2009, İzmir, May 2009.
5. İ. H. Köse, Z. Çatmakaş, H. R. Öz, O. Toker, "Solunum seslerinin analizi için bir devre tasarımı, gerçekleşmesi ve geli[s]tirme kiti ile birleştirilmesi", IV. Ulusal Biyomekanik Kongresi, Erzurum TURKEY, October 2008.

#### Book Reviews

1. O. Toker, Review of "DETERMINISTIC AND STOCHASTIC TIME DELAY SYSTEMS, El-Kebir Boukas and Zi-Kuan Liu, Birkhauser, Boston, MA, 2002, 423pp, ISBN 0-8176-4245-5," *International Journal of Robust and Nonlinear Control*.

#### Abstracts of Conference and Workshop Presentations

1. R. Fan, O. Toker, L. Cheded, and M. El-Shafei, "Investigation of Internet-Based SCADA Systems: Design and Application," *The 3rd Workshop on Industrial Systems and Control (WISC 2004)*,KFUPM, Dhahran, Saudi Arabia, May 2004.
2. O. Toker, and F. Al-Sunni, "Design and Implementation of a Java Based Distributed Control System," *The 3rd Workshop on Industrial Systems and Control (WISC 2004)*,KFUPM, Dhahran, Saudi Arabia, May 2004.
3. O. Toker and B. Jager, "Conservatism of the standard upper bound test: Is  $\sup(\bar{\mu}/\mu)$  finite? Is it bounded by 2?," *Workshop on Open Problems in Systems and Control*, Liège, Belgium, June 1997.
4. O. Toker, Benelux 1996, Eindhoven, The Netherlands.

5. C. Gu, O. Toker, and H. Özbay, "On the Two-Block  $\mathcal{H}^\infty$  Problem for a Class of Unstable Distributed Systems," in *Abstracts for AMS Joint Mathematics Meetings*, Cincinnati OH, USA, January 1994, vol. **15** No.1, 1994, p. 104.
6. O. Toker, and H. Özbay, "Parameterization of suboptimal  $\mathcal{H}^\infty$  controllers for unstable distributed plants," in *Abstracts of SIAM Conference on Linear Algebra in Signals, Systems and Control*, Seattle WA, USA, August 1993, p. 26.

### Technical Reports

1. O. Toker, and H. Özbay, "On the Computation of Suboptimal  $\mathcal{H}^\infty$  Controllers for Unstable Infinite Dimensional Systems," IMA preprint No. 1048, University of Minnesota, November 1992.
2. O. Toker, and H. Özbay, *On fixed order suboptimal  $\mathcal{H}^\infty$  controllers*, Control Research Laboratory Technical Report No. 1062-W92-R, Department of Electrical Engineering, The Ohio State University, Winter 1992.
3. O. Toker, *DISC Research Report*, WFW report 96.156, Eindhoven University of Technology, Faculty of Mechanical Engineering, September 1996.
4. O. Toker, and M. Sunar, "Substructural control by  $H_\infty$  methods," SABIC 2000/10 project final report.
5. O. Toker, and F. Al-Sunni, "Java based distributed control over the Internet," KACST ARP-20-74 project final report.
6. M. Al-Mouhamed, O. Toker, and N. Merah, Design of a Telerobotics System over a LAN," KACST ARP-20-80 project final report.
7. O. Toker, and E. Boukas, "GF( $p^m$ ) valued Pseudorandom Sequences and the relationship between MPRS(GF( $p^m$ ),  $n$ ) and MPRS(GF( $p$ ),  $mn$ )," Department of Mechanical Engineering Technical Report, École Polytechnique de Montréal, Les cahiers du Gerad, G-2003-38, June 2003, Montréal, CANADA.
8. O. Toker (PI), and L. Cheded, "Design of Web Based Process Control and Scada Systems: A Java/XML approach," SABIC 2002/07 final report.
9. O. Toker (PI), and M. Sunar. "A substructural control technique by  $H_\infty$  method for nonlinear and fuzzy structures," SABIC/FT 2003/11 project final report.
10. O. Toker (PI), and H. Gümüşkaya. "Design, Implementation and Performance Analysis of High Performance Telerobotic Systems Using Real Time Communication Protocols on Wireless Networks," TUBITAK EEEAG-108E091 project final report.

## 2.2 Funded projects

1. O. Toker (PI), and M. Sunar. "Substructural control by  $H_\infty$  methods," funded by the Saudi Basic Industries Corporation (SABIC).  
Project number: SABIC 2000/10. Duration: 18 months. Status: Completed.
2. O. Toker (PI), and F. Al-Sunni. "Java based distributed control over the Internet," funded by the King Abdulaziz City for Science and Technology (KACST).  
Project number: KACST AR20-74. Duration: 2 years. Status: Completed.
3. M. Al-Mouhamed, O. Toker (co-PI), and N. Merah.  
"Design of a Telerobotics System over a LAN," funded by the King Abdulaziz City for Science and Technology (KACST).  
Project number: KACST AR20-80. Duration: 2 years. Status: Completed.

4. O. Toker (PI), and L. Cheded, "Design of Web Based Process Control and Scada Systems: A Java/XML approach," funded by the Saudi Basic Industries Corporation (SABIC).  
Project number: SABIC 2002/07. Duration: 18 months. Status: Completed.
5. O. Toker (PI), and M. Sunar. "A substructural control technique by  $H_\infty$  method for nonlinear and fuzzy structures," funded by the Saudi Basic Industries Corporation (SABIC).  
Project number: FT 2003/11. Duration: 12 months. Status: Completed.
6. O. Toker (PI), and E. Imal. "Design and Implementation of a Mitsubishi RV-2AJ based telerobotic system with 3D visualization and augmented reality," funded by Fatih University.  
Project number: P5006052. Duration: 12 months. Status: Completed.
7. H. R. Öz, N. Emanet, O. Toker (co-PI), "Solunum seslerinin analizi için gömülü sistem tasarımı ve gerçekleştirilmesi," Fatih University Research Fund, December 2007. Status: Completed.
8. (As co-PI) "Endüstriyel Otomasyon Teknolojisi Geliştirme ve Sanayi İbirliği Oluşturma Yatırım Projesi," DPT, December 2007 (Over 1M USD). Status: Completed.
9. O. Toker (PI), and H. Gümüşkaya. "Design, Implementation and Performance Analysis of High Performance Telerobotic Systems Using Real Time Communication Protocols on Wireless Networks."  
Project number: TUBITAK-1001 EEEAG-108E091. Duration: 2 years. Status: Completed.
10. (As co-PI) "Automation of Campus Treatment Plant," funded by Fatih University, June 2007. Status: Completed.
11. O. Toker, and T. Yildirim, "High Sensitivity Intelligent Sensor Design by Advanced Image Processing and Artificial Intelligence Techniques with Statistical Mode Fiber Optic Sensors," funded by Fatih University, June 2010. Status: In progress.
12. H. R. Öz, N. Emanet, O. Toker (co-PI), "Design of 14-channel real-time embedded system for pulmonary sound analysis," funded by Fatih University, June 2010. Status: In progress.

## 2.3 Thesis supervision

As supervisor (Main advisor):

- Mohammed Nazeeruddin (M.S.) (Completed, now working in KFUPM as Lecturer)  
Thesis title: "Robust congestion control for ATM's ABR service and design of a datalink layer interface library", 1999.
- Abdulkhaliq Al-Harthi (M.S.) (Completed, now working in U.A.E.)  
Thesis title: "Design of telerobotic system over a local area network (LAN)", 2002.
- Asif Iqbal (M.S.) (Completed, now continuing his Ph.D. in Germany)  
Thesis title: "Multistream realtime control of a distributed telerobotic system", 2003.
- R.Fan (M.S.) (Part time student from Aramco)  
Thesis title: "Design of Web Based Process Control and Scada Systems: A Java/XML approach", June 2004.
- C. Ulas (M.S.), Fatih University, *Completed.*
- Y. Adibelli (M.S.), Fatih University, *Completed.*
- S. Demir (M.S.), Fatih University, *Completed.*
- H. S. Efendiğlu (M.S.), Fatih University, *Completed.*
- H. S. Efendiğlu (Ph.D.), Yıldız Technical University, *In Progress.*

### 3.1 Membership and service in professional organizations

- Member of the Editorial Board
  - (1) Journal of Control Science and Engineering (Hindawi)
  - (2) Physics Express (Simplex Academic Publishers)
- Co-chaired a session in the IEEE Conference on Decision and Control, 1996, Kobe, JAPAN (WA-11 session).
- Chaired a session in SCS 1999/SPECTS 1999 conference in Chicago, IL, USA.
- Chaired a session in the ASME conference "Engineering Systems Design and Analysis (ESDA)", 2002, Istanbul, TURKEY (APM S21 session).
- Member of the organizing committee of WISC 2004 Workshop.
- Member of the scientific committee of the ICICS 2004 International Conference.
- Co-chaired a session in the ICWN'09, Las Vegas, NV, USA

### 3.2 Awards & Honors

- Received 2 awards from the College of Computer Sciences and Engineering, KFUPM, in 2003, and 2004 for interdisciplinary research activities.
- Recipient of Dutch Institute of Systems and Control Postdoctoral Fellowship Award.
- Best presentation award in American Control Conference, 1995 (WA-16 session).
- Recipient of Ohio State University Presidential Fellowship award.
- Boğaziçi University Dean's High Honor List.
- Ranked first among the graduating seniors in the double major program, and received an award from the Rector of the University.