

Professor and Dean, Faculty of Business and Administration, International University of Sarajevo, Bosnia-Herzegovina.

Professor, Yasar University, Izmir, Turkey.

Courtesy Professor, Department of Agricultural and Biological Engineering University of Florida.

Ph.D. (1983) University of Florida, Industrial and Systems Engineering (minor in Anthropology).

Registered Professional Engineer.

As a researcher, academician, businessman, design engineer, and media person, Sencer Yeralan has a diverse and eclectic, albeit a non-conventional career.

After fifteen years as a full-time member of the faculty of Industrial Engineering at the University of Missouri and as a tenured member at the University of Florida (UF), he left his position to pursue private interests in industrial automation and control. Since then, he holds a courtesy position at the University of Florida and maintains a presence at UF. During his work in industry, he taught a single course on computer hardware and software design each year without compensation. He continues to serve on committees of graduate students who work on various fields of industrial engineering and operations research.

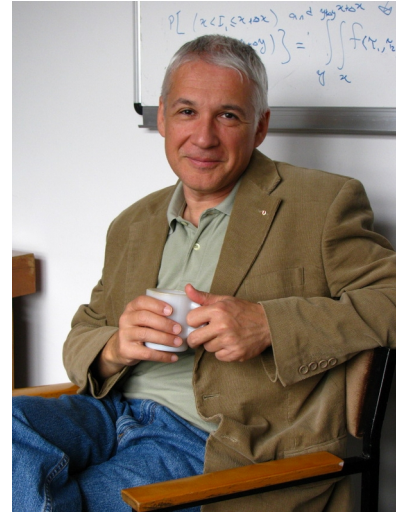
Supported by the University of Florida and TUBITAK¹ (The Technological and Scientific Research Council of Turkey, equivalent to the NSF in the U.S.), marking his 30th graduation anniversary in 2008, he was at his alma mater METU as a visiting scholar to teach a doctoral course in Operations Research. While there, he produced and hosted the radio program “Science and Technology” at Radio METU. With continued support from TUBITAK and UF, Dr. Yeralan developed courses in sustainable systems engineering and management at the department of Industrial Engineering at METU. Concurrently, in an effort to promote interest in science and technology, he initiated an effort at TUBITAK to shoot a series of pod-cast videos on topics of general popular science, as well as engineering and sustainability.

Upon returning to the States at the end of 2010, Dr. Yeralan has accepted a position as Assistant Dean of the College of Technology and Innovation at the University of South Florida Polytechnic (USFP). USFP was in the process of establishing itself as the first public polytechnic university in Florida. The college had the unique quality of combining business, engineering, and information technologies under a single roof. Subsequently, Dr. Yeralan served as the interim dean of the college. Under his leadership, the college set itself high goals, focusing on industry-need-driven research, especially tuned to the requirements of local industries. Accordingly, new curricula and programs that address 21st Century higher education needs were developed, resulting in six new STEM (Science, Technology, Engineering, Mathematics) programs.

Between 2013 and 2017, Dr. Yeralan served as Professor at Yasar University in Izmir Turkey. His activities focused on developing the new doctoral program, and cultivating international and university-industry relations, accreditation of two engineering departments, and large scale on-line courses. Besides engineering courses, he taught courses in philosophy, systems science, globalization, technology, open-source software, ethics, and statistics for law. He produced and presents the weekly radio program Yorunge (Orbit) on popular science².

Since 2017, Dr. Yeralan serves as Professor and Dean of the Faculty of Business and Administration³ at the International University of Sarajevo⁴. His duties include streamlining institutional processes, enhancing student and faculty diversity, and an aggressive outreach program to establish modalities of cooperation between the university and regional governmental and industrial institutions.

He has been giving frequent talks and seminars, and has appeared on several TV programs on sustainability, finance, and general popular science topics (see for example, the TV appearance *Ekonomi Gundemi*⁵). He



1 TUBITAK, <http://www.tubitak.gov.tr/en/>

2 See for example, <http://radyu.yasar.edu.tr/audio/luca-giberti/>

3 Faculty of Business and Administration, <http://fba.ius.eu.ba/>

4 International University of Sarajevo, <http://ius.eu.ba/>

5 Ekonomi Gundemi, November 28, 2014 (<http://www.youtube.com/watch?v=At71VgGMtDY>)

also appears on promotional videos targeted for social media⁶. Recently, he has been invited to give a series of lectures on sustainability at the Second Istanbul Design Biennial⁷ as well as at the Zhengzhou University at Henan, China. He also talked at the TED⁸ Bosphorus Conference in Istanbul and at the University of Limerick⁹. He has won the popular science competition, Grand Science Slam 2016¹⁰. He frequently appears as an invited keynote speaker at various international conferences. He was a keynote speaker at the international conference *Sustainable Life in Manufacturing*¹¹ in October 2012. He was also a keynote speaker and the master of ceremonies at the Operations Research and Industrial Engineering Conference, YAEM 2016¹². He gave the keynote speech at the 2016 [Science Unites All](#) Conference and Fair, a [Marie Skłodowska Curie \(MSCA\)](#) action under the [EU Framework Programme for Research and Innovation Horizon 2020](#).

As a consultant and advisor, he continues to work with international universities to develop new degree programs under a wide range of innovative academic frameworks. At the University of Limerick in Ireland, his work has led to an integrated “conceive-design-implement-operate” course for engineering and operations management. Similarly, working with the Mediterranean University in Turkey, he helped design the sciences and humanities curricula. He is currently collaborating with Brazilian universities in similar ventures. While abroad, he has maintained his work with industry as he worked in projects with large European automotive industries to streamline manufacturing operations.

During his tenure at the universities, Dr. Yeralan has written over one-hundred technical publications, has supervised six doctoral students, and has been involved in over \$1,000,000 of funded research projects and equipment grants. He has also served as a referee for various journals and for the National Science Foundation. However, he is perhaps best known for his five textbooks in embedded control. His sixth textbook, published in 2016, is titled “An Introduction to Industrial Engineering through Computation.” He is currently working on smart systems for post-globalized industry and agriculture, modeling complex dynamical systems, and analytical methods for combinatorial optimization. He currently serves as an associate editor of the periodical [Stem Cell Fundamentals and Practice](#) and serves on the editorial board of [MUK Publications](#).

As a chief technology officer, Dr. Yeralan has been involved in the design and development of over a dozen major commercial products in industrial automation and control, high-speed machine tools, automotive engine control, aerospace systems, and production agriculture. His work has been instrumental in promulgating information and in subsequent technology transfer from chip manufacturers to academic institutions. The READS tool-chains he wrote are used as standard development environments among many schools and universities. At the same time, the business experience has given Dr. Yeralan invaluable opportunities to observe new business practices in the making, such as the IT revolution, ISO quality practices, and globalization.

Besides embedded automation and control, he is interested in number theory, cosmology, and cultural anthropology. He is an avid volunteer, especially in youth-oriented projects. He enjoys mountain biking (riding about 100 km per week), and plays blues and Brazilian jazz. He often writes under the pseudonym Buggy Moon and plays music under the pseudonym Rusty Fingers. Recently, he has given benefit concerts and has been acting in single-actor short films¹³.

Web references

[yeralan.org](#) general website

[bugsymoon.org](#) blog site (under the pseudonym Buggy Moon)

[rustyfingers.org](#) music site (under the pseudonym Rusty Fingers)

[Yorunge](#), Yasar University Radio (<http://radyu.yasar.edu.tr/programlar/yorunge/>).

[Radio METU](#) (www.radyoodtu.com.tr)

[METU](#) (www.metu.edu.tr) Middle East Technical University

[YU](#) (www.yasar.edu.tr) also see yeralan.yasar.edu.tr Yasar University

[Stem Cell Fundamentals and Practice](#), (www.cellstem.org/)

[MUK Publications](#), (<http://www.mukpublications.com/>)

6 See for example, a video for Erasmus students <https://www.youtube.com/watch?t=18&v=h6s8SZod-Ao>

7 The Second Istanbul Design Biennial, <http://2tb.iksv.org/index.asp>.

8 Technology, Entertainment, Design (see www.ted.com and www.ted.com/tedx/events/204)

9 University of Limerick, Ireland, <http://www.ul.ie/>

10 Grand Science Slam 2016, <http://www.grand-science-slam.net/en/>

11 SLIM 2012, <http://sempozyum.sdu.edu.tr/slim2012/>

12 YAEM 2016, <http://yaem2016.yasar.edu.tr/>

13 “Piko,” single actor short film, written and directed by O. Saltik., 2015.

Sencer Yeralan

*International University of Sarajevo,
Yasar University
and
University of Florida*

<http://www.yeralan.org>

yeralan@ufl.edu

(October 2017)

Personal

Registered professional engineer, US citizen, excellent health.

Education

1978, B.S. Middle East Technical University, Industrial Engineering
1979, M.E. University of Florida, Industrial and Systems Engineering
1983, Ph.D. University of Florida, Industrial and Systems Engineering
(minor in Anthropology)

Experience

Academic

International University of Sarajevo, Bosnia-Herzegovina

Sept. 2017 - present

Professor and Dean of the Faculty of Business and Administration

University of Florida, Agricultural and Biological Engineering Department

1998 - present Courtesy Professor

Yasar University, Izmir Turkey

Sept. 2013 - 2017 Professor

Develop the newly established doctoral program. Establishing a think tank with links to industry, governmental and supra-national organizations. Curricula modernization, accreditation, recruitment.

University of South Florida at Lakeland

July 2012 - 2013 Faculty Administrator

University of South Florida Polytechnic, College of Technology and Innovation

2013 - July 2013 Interim Dean (engineering, business, and information technologies)

Program development, faculty mentoring and seeking external research funding, AACSB and ABET accreditation, industrial advisory board, student recruitment and articulation agreements, promotion and tenure.

2010 - 2011 Assistant Dean (engineering and information technologies)
Curriculum development, faculty recruitment, industry research partnerships, ABET accreditation.

Middle East Technical University,

2008 - 2009 Exchange Scholar

Developed courses in sustainability and globalization, with support from TUBITAK (The Technological and Scientific Research Counsel of Turkey, equivalent to the NSF in the U.S.),

University of Florida, Industrial and Systems Engineering Department

1988 - 1997	Director, Industrial Research Laboratories
1987 - 1988	Visiting Assistant. Professor
1988 - 1989	Assistant Professor
1989 - 1997	Associate Professor
1998 - present	Courtesy Professor

University of Missouri-Columbia, Industrial Engineering Department

1983 - 1986	Assistant Professor
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Business

1989 - 2009	Founder and Chief Technology Officer, Rigel Corporation. <i>Cutting-edge technology company in microcontroller, industrial, medical, automotive, avionics, and defense systems applications; technology transfer to educational and academic institutions. Corporate relations, business strategy planning, web-based e-business, quality assurance programs, international relations, virtual companies, globalization.</i>
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Industrial

Summer 1976	Industrial Engineering, ETI Food Industries, Analyst Eskisehir, Turkey
Summer 1977	Industrial Engineering, Cyprus Turkish Industrial Analyst Holding (KTSH)
1986	Consulting, Toastmasters Inc., Columbia, Missouri, <i>Robust design of toaster timer circuitry</i>
1986	Consulting, 3M Columbia Plant, Columbia, Missouri, <i>Design of experiments, lens manufacturing</i>
1990	Consulting, Manufacturing Laboratories, Inc., Gainesville, Florida, <i>Spindle speed encoder subsystem design</i>
1992 - 1997	Siemens Components, Inc., Santa Clara, California, <i>Design of 8-bit and 16-bit microcontroller evaluation boards</i>
1989 - 2009	Rigel Corporation, Gainesville, Florida, <i>Development of an over 100 hardware and software systems, educational packages for the industrial uses of microcontrollers.</i>
2009 - 2010	Fiat Industries, Bursa Turkey, <i>Robotic automotive production line modeling and analysis.</i>

Media

2013	Yorunge (Orbit), Radio Yasar, <i>produce and present a weekly program on popular science</i> [http://radyu.yasar.edu.tr/programlar/yorunge/] .
2008 - 2009	Science and Technology, Radio METU <i>produce and present a weekly program on science.</i>
2008 - 2009	Bilim ve Teknik, <i>popular science article on photography.</i>

2006 - 2014	Various TV appearances on volunteerism , international finance, and sustainability.
2009 - present	www.sustainabilityengineering.org , <i>public service site for the engineering aspects of sustainability, definitions, video lectures, Pod-casts, and disruptive technologies.</i>
2015	Actor, single actor short film, "Piko," written and directed by O. Saltik., 2015.

Professional Organizations (past and present)

American Statistical Association Mid-Missouri Chapter, Vice President, 1985-1986.

Operations Research Society of American UMC Student Section, Faculty Advisor, 1984-1986.

Alpha Pi Mu

Institute of Industrial Engineers

Operations Research Society of America

The Institute of Management Sciences

American Statistical Association

Registered Professional Engineer

Awards

Fellowship, Turkish Council of Scientific and Technical Research (TUBITAK), 1971 – 1978.

Fulbright Fellowship, 1978 – 1982.

Outstanding Young Men of America, 1985.

Siemens Application Note Award, "Bootstrapping the 80C166 in a ROM-less System", (with a cash prize), 1996.

Visiting Scholar, Turkish Council of Scientific and Technical Research (TUBITAK), 2008-2009.

Interests

Professional

Applied probability theory, operations research, technology management, complex dynamical systems, industrial automation and control, philosophy of engineering.

Scientific

Cosmology, number theory.

Personal

Biking and mountain biking (riding about 100 km per week), photography, acting, RC helicopters. music.

ACADEMIC**Textbooks**

1. Yeralan, S. and A. Ahluwalia, "Programming and Interfacing 8031 Microcontrollers," Addison-Wesley Publishing Company, 1995.
2. Yeralan, S. and H. Emery, "The 8051 Cookbook for Assembly and C with Experiments in Mechatronics and Robotics," Rigel Press, 1999.
3. Yeralan, S. and H. Emery, "Programming and Interfacing the 8051 Microcontroller in C and Assembly," Rigel Press, 2000.
4. Yeralan, S. and H. Emery, "Internetworking Eight-Bit Microcontrollers - Fundamentals and Applications with the 8051," Rigel Press, 2003.
5. Yeralan, S., "Programming and Interfacing the ARM7TDMI with the GNU C Compiler and the Eclipse IDE," Rigel Press, 2008.
6. Yeralan, S., "An Introduction to Industrial Engineering through Computation," 2016.

Book Contributions

1. Yeralan, S. and C. M. Klein, "Span of Control and Organization Design," Applications of Fuzzy Set Methodologies in Industrial Engineering, Editors G. W. Evans, W. Karwowski, and M. R. Wilhelm, Elsevier Science Publishing Company, 1989.
2. Yeralan, S., "Computer Networks in Manufacturing," Handbook of Manufacturing and Automation, pp 727-736, Editors R. Dorf and A. Kusiak, John Wiley, 1994.
3. Yeralan, S. and B. Tan, "Fuzzy Logic Control as an Industrial Control Language for Embedded Controllers," Design and Implementation of Intelligent Manufacturing Systems, H. R. Parsaei and M. Jamshidi editors, pp 107- 140, Prentice- Hall Inc., 1995.

Articles in Refereed Journals

1. Yeralan, S., and C. A. Chang, "Models of Parts Orienting Systems," Decision Sciences 17, (1986), 357-375.
2. Yeralan, S., W. E. Franck, Jr., and M. A. Quasem, "A Continuous Materials Flow Production Line Model with Station Breakdown," European Journal of Operational Research 27, (1986), 289-300.
3. Chang, C. A., S. Yeralan and J. Goldman, "A Time and Buffer Method for Multi-Arm Assembly Stations," Robotics and Material Flow 1, (1986), 187-196.
4. Yeralan, S., A. J. Dieck and R. F. Darwin, "Economically Optimum Maintenance, Repair, and Buffering Operations in Manufacturing Systems," Engineering Economist 31, (1986), 279-292.
5. Chang, C. A., J. M. Pan, J. Goldman, S. Yeralan and T.-Y. Tseng, "Use of Computer Vision as a Proximity Sensing Method," Robotics and Industrial Engineering; Selected Readings, E. L. Fisher and O. Z. Maimon, Editors, Industrial Engineering and Management Press, 2, (1986), 192-197.
6. Yeralan, S., and E. J. Muth, "A General Model of a Production Line with Intermediate Buffer and Station Breakdown," IIE Transactions 19, (1987), 123-139.
7. Dieck, A. J., S. Yeralan and N. Salari, "Solution to the Lot Size Multi-item Deterministic Inventory Problems with Budget and/or Space Constraints Using a Microcomputer," Journal of Computers and Industrial Engineering 14, (1988), 41-51.
8. Yeralan, S., and J. A. Ventura, "Computerized Roundness Inspection," International Journal of Production Research 26, (1988), 1921-1935.
9. Yeralan, S., and A. J. Dieck, "Workstage Repair Policies for Sequential Manufacturing Systems," Annals of Operations Research 17, (1989), 249-270.
10. Ventura, J. A., and S. Yeralan, "The Minimax Center Estimation Problem for Automated Roundness Inspection," European Journal of Operations Research 41, (1989), 64-72.
11. El-Hafsi, M., and S. Yeralan, "Computer Control System for a Metal Cutting Machine," Computers and Industrial Engineering, Vol. 23, No. 1-4, pp. 345-348, 1992.
12. Yeralan, S. and C. S. Lin, "Genetic Search with Dynamic Operating Disciplines," Computers and Operations Research, Vol. 21, No 8., pp941-954., 1994.

13. Francis, R. L., H. Hamacher, C-Y. Lee and S. Yeralan, "Finding Placement Sequences and Bin Locations for Cartesian Robots," *IIE Transactions*, Vol. 26, No. 1, pp 47-59, 1994.
14. Yeralan, S., and H-C. Pai, "Attributes for Expedient Computer Vision Inspection," *IIE Transactions*, Vol. 26, No. 1, pp 60-69, 1994.
15. Balaban, M. O., S. Yeralan, and Y. Bergman, "Determination of Count and Uniformity Ratio of Shrimp by Machine Vision," *Journal of Aquatic Food Product Technology*, Vol. 3, No. 3, pp 43-58., 1994.
16. Tan, B. and Yeralan, B., "A Unified-Boundary Interior Model for Continuous Materials Flow Production Lines with Station Breakdown," *Yoneylem Arastirmasi Dergisi/Transactions on Operational Research*, Volume 6, Number2, pp. 95-120, November 1994.
17. Tan, B. and Yeralan, S., "A Fuzzy Decomposition Method for Multistation Production Systems Subject to Blocking," *International Journal of Production Economics*, Vol. 42, No. 3, pp. 245-262, 1995.
18. Tan, B., Yeralan, S., Babu. S, and Osborn, B., "Product Quality/Tool Reliability Modeling of Complex Manufacturing Tools," *Endustri Muhendisligi (Industrial Engineering Journal of Turkish Chamber of Engineers)*, Volume 5, Number3, pp. 3-11, 1995.
19. Yeralan, S. and Tan, B. "A Station Model for Continuous Materials Flow Production," *International Journal of Production Research*, Vol. 35, No. 9, pp. 2525-2541, 1997.
20. Tan, B. and Yeralan, S., "A Decomposition Model for Continuous Materials Flow Production," *International Journal of Production Research*, Vol. 35, No. 10, pp. 2759-2772, 1997.
21. Luzuriaga, D. A., Balaban, M. O., Yeralan, S., "Analysis of Visual Quality Attributes of White Shrimp by Machine Vision," *Journal of Food Science*, Vol. 62 No. 1, pp. 113-118, 1997.
22. Yeralan, S. and Tan, B., "Analysis of Multistation Production Systems with Limited Buffer Capacity, Part I the Subsystem Model," *Mathematical and Computer Modelling*, Vol. 25, No. 7, pp. 109-122, 1997.
23. Tan, B. and Yeralan, S., "Analysis of Multistation Production Systems with Limited Buffer Capacity, Part II the Decomposition Method," *Mathematical and Computer Modelling*, Vol. 25, No. 11, pp. 109-123, 1997.
24. Yeralan, S. and Tan, B. "A Station Model for Continuous Materials Flow Production," *International Journal of Production Research*, Vol.35, No.9, pp. 2525-2541, 1997.
25. Fadiloglu, M.M. and S. Yeralan, "A general theory on spectral properties of state-homogeneous finite-state quasi-birth-death process," *European Journal of Operational Research*, vol. 128, pp. 402-417, 2001.
26. Fadiloglu, M., and S. Yeralan, "Models of production lines as quasi-birth-death processes," *Mathematical and Computer Modelling*, Vol. 35, No. 7-8, pp. 913-930, 2002
27. Yeralan, S., M.R. Ozdoglar, and M. Azizoglu, "Assessment of Criteria-Rich Rankings for Environmental Policy Making," *International Journal of Multi-Criteria Decision Making*, vol. 1. Vol 1: pp. 280-297, 2011.
28. S. Kayaligil, S., S. Yeralan, and K. Demirtas, "Approximate Performance Analysis of a Closed-Line with Random Failures and Aggregation of Segments," *Annals of Faculty Engineering Hunedoara/International Journal of Engineering*, 2011.
29. Mahoney, J.F., and S. Yeralan, "Isotropic Tensor Identities as the Foundation of Many Algebraic Relations," *International Journal of Lean Thinking*, Vol 3., Issue 1., pp 53-60, June 2012.
30. Yeralan, S., "Mathematics, Systems Science, and Engineering for Stem Cell Research," *Stem Cell Fundamentals and Practice*, 1(1), 10-12, doi: 10.5455/sfp.20150402040321, 2015.
31. Kalaycilar, E.G., M. Aizizoglu, S. Yeralan, "A Disassembly Line Balancing Problem with Fixed Number of Workstations," *European Journal of Operational Research*, Vol 249, Issue 2, pp 592-604, March, 2016.

32. Durmus, D., S. Yeralan, A Korugan, "Investigating the Potential of State-Truncation Approximations for Production Lines," Stochastic Modeling and Applications, Vol.20, No. 2, pp 91-109, December, 2016.
33. Sağol, G. and S. Yeralan, "An Industry 4.0 Pilot Study in Materials Handling," International Journal of Production Research, submitted, August 2017.

Articles in Conference Proceedings

1. Muth, E. J., and S. Yeralan, "Effect of Buffer Size on Productivity of Work Stations that are Subject to Breakdown," Proceedings of the 20th IEEE Conference on Decision and Control, December, 1981.
2. Dieck, A. J., and S. Yeralan, "Forecasting In-Patient Admissions to Public Health Facilities: A Comparison of Box-Jenkins and Winters' Approaches," Proceedings of the 15th Annual Pittsburgh Conference on Modeling and Simulation, April, 1984.
3. Chang, C. A., J. M. Pan, J. Goldman, S. Yeralan, and T.-Y. Tseng, "Use of Computer Vision as a Proximity Sensing Method," Proceedings of the Institute of Industrial Engineering Spring Conference, May, 1984, 83-88.
4. Yeralan, S., and C. A. Chang, "Modeling Parts Orienting Systems," Proceedings of the Institute of Industrial Engineering Spring Conference, May, 1984.
5. Yeralan, S., and C. M. Klein, "No Defects Policy Quality Control Models - A Systems Approach," Proceedings of the International AMSE Conference, August, 1984.
6. Yeralan, S., A. J. Dieck and R. F. Darwin, "The Effect of Maintenance and Repair Operations on the Profitability of Production Lines," Proceedings of the International AMSE Conference, August, 1984.
7. Yeralan, S., and C. Isik, "Computing the Productivity and Profitability of Production Lines," Proceedings of the 7th Annual Conference on Computers and Industrial Engineering, March, 1985.
8. Eastman, R. M., and S. Yeralan, "Robotics - Impacts on Industrial Engineering and Management Science Education," Proceedings of the ASEE Midwest Regional Conference, March, 1985.
9. Yeralan, S., A. M. Saffar and G. Chong, "An Experimental Course in Microcomputer Hardware for Industrial Engineering Students," Proceedings of the ASEE Midwest Regional Conference, March, 1985.
10. Yeralan, S., B. Yeshilada and D. Vivas, "An Economic Growth Model with Political Variables for Developing Countries," Proceedings of the 16th Annual Pittsburgh Conference on Modeling and Simulation, April, 1985.
11. Chang, C. A., M. S. Leonard, S. Yeralan and M. Chen, "SPIRES," Proceedings of the Institute of Industrial Engineering Spring Conference, May, 1985, 73-83.
12. Klein, C. M., and S. Yeralan, "Setup Time Prediction for Work Stations of an Automated Manufacturing System," Proceedings of the International AMSE Conference on Modeling and Simulation, July, 1985.
13. Yeralan, S., B. Yeshilada and D. Vivas, "The Effect of Political Inputs on Economic Growth," Proceedings of the International AMSE Conference on Modeling and Simulation 16, July, 1985, 1653-1657.
14. Quasem, M. A., S. Yeralan and W. E. Franck, "The Effect of Station Repair Policies on the Productivity of Production Lines," Proceedings of the 1985 ASA Conference.
15. Yeralan, S., C. A. Chang and M. S. Leonard, "Evaluating Parts Orienting Systems for Robotic Assembly Stations," Proceedings of the Southcon Electronic Show and Convention, 1986.
16. Yeralan, S., and S. Khajenoori, "Computing the Productivity of Multistation Serial Manufacturing Systems: A Heuristics Approach," 8th Annual Conference on Computers and Industrial Engineering, 1986.
17. Yeralan, S., and C. M. Klein, "Learning Curves Revisited," Proceedings of the Industrial Ergonomics and Safety Conference '86, Trends in Ergonomics/Human Factors III, W. Karwowski, Editor, 1986, 563-570.

18. Klein, C. M., and S. Yeralan, "A Fuzzy Network Model," Proceedings of the International AMSE Conference on Modeling and Simulation, September, 1986.
19. Yeralan S., and C. M. Klein, "Mixing Techniques in Forecasting," Proceedings of the International AMSE Conference on Modeling and Simulation, September, 1986.
20. Klein, C. M., and S. Yeralan, "Network Flow Models with Auxiliary Edge and Vertex Attributes," Proceedings of the 1987 Conference of the North American Fuzzy Information Processing Society (NAFIPS '87), 1987.
21. Klein, C. M., and S. Yeralan, "Weighting Schemes for Mixing Techniques in Forecasting," Proceedings of the Institute of Industrial Engineering Spring Conference, 1987.
22. Dieck, A. J., S. Yeralan and K. Strickler, "An Approach to Improve Accuracy in Time Series Forecasting when Outlying Observations Exist: A Case Study for Total Energy Demand," Proceedings of the Institute of Industrial Engineering Spring Conference, 1987.
23. Klein, C. M., and S. Yeralan, "Establishing Time Buffers Using Activity Networks with Inexact Attributes," Proceedings of the IXth International Conference on Production Research, 1987.
24. Francis, R. L., H. W. Hamacher, C.-Y. Lee, S. Yeralan, "Workplace Planning for Robotic Assembly - Progress Report," Proceedings of the National Science Foundation Grantee's Conference, 1989.
25. Ventura, J. A., and S. Yeralan, "Optimization Techniques for Automated Inspection of Rectangular and Square Parts," Proceedings of the 12th Computers and Industrial Engineering Conference, Orlando, Florida, March, 1990.
26. Yeralan, S., C. M. Klein, and J. A. Ventura, "Organization Design - Computational Methods Under Vagueness," Proceedings of the 12th Computers and Industrial Engineering Conference, Orlando, Florida, March, 1990.
27. Yeralan, S., and D. J. Ramcharan, "A New Standard for Industrial Control Languages," Proceedings of the 12th Computers and Industrial Engineering Conference, Orlando, Florida, March, 1990.
28. Larusson, T., S. Agarwal and S. Yeralan, "A Survey of the Use of Intelligent Automation in the Food Processing Industry," Proceedings of the Third Conference on Recent Advances in Robotics, Boca Raton, Florida, May, 1990.
29. Agarwal, S., T. Larusson and S. Yeralan, "Industrial Applications of Neural Networks," Proceedings of the Third conference on Recent Advances in Robotics, Boca Raton, Florida, May, 1990.
30. Yeralan, S., S. Agarwal, and T. Larusson, "Forecasting Near-Future Events in Manufacturing Cell Control," Proceedings of the Fifth IEEE International Symposium on Intelligent Control, Philadelphia, Pennsylvania, September, 1990.
31. Yeralan S., and D. J. Ramcharan, "Activities at the Industrial Research Laboratories," Prociem '90 The Third Florida Conference on Productivity through Computer Integrated Engineering and Manufacturing, Tampa, Florida, November 1990.
32. Larusson, T., M. O. Balaban, S. Yeralan, W. S. Otwell, "Application of Computer Vision to Seafood Quality Evaluation," Proceedings of the Second Joint Conference Tropical and Subtropical Fisheries Technologies and Atlantic Fisheries Technologies Societies, Orlando, Florida, December 3-5, 1990.
33. Balaban, M. O., Y. Bergman, S. Yeralan, and W. S. Otwell, "Automated Quality Evaluation of Shrimp," Proceedings of the Sixth International Conference on Engineering and Food, May 23-27, Makuhari Messe, Japan, 1993. Also published in *Developments in Food Engineering*, Yano, Matsuno and Nakamura (Eds). Blackie Academic and Professional, New York. p: 972-974.
34. Yeralan S., and R. L. Francis, and C.-Y. Lee, "SESMAM - Software Emulator for Surface Mount Assembly Machines," Prociem '90 The Third Florida Conference on Productivity through Computer Integrated Engineering and Manufacturing, Tampa, Florida, November 1990.

35. Yeralan, S., and R. Arrestam, J. Holmlund, and D. J. Ramcharan, "Fuzzy-Logic Control Language for Embedded Controllers," Proceedings of the 14th Computers and Industrial Engineering Conference, Orlando, Florida, March, 1992.
36. Yeralan, S., and M. El-Hafsi, "Computer Control System for a Metal Cutting Machine," Proceedings of the 14th Computers and Industrial Engineering Conference, Orlando, Florida, March, 1992.
37. Tan, B., S. Yeralan, and B. Osborn, "Computer-Aided Reliability Modeling - An Application in Semiconductor Manufacturing," Proceedings of the 14th Computers and Industrial Engineering Conference, Orlando, Florida, March, 1992.
38. Steinberg, L. and S. Yeralan, "Industrial Engineering Support Network for Small Manufacturers," *Computers and Industrial Engineering*, Vol. 23, Nos 1-4, pp 467-469, 1992.
39. Tan, B., S. Yeralan, S. Babu, and B. Osborn, "Computer-Aided Reliability Modeling - An Application in Semiconductor Manufacturing," *Computers and Industrial Engineering*, Vol. 23, Nos 1-4, pp169-172, 1992.
40. Yeralan, S. and S. X. Bai, "Activities in the Industrial Research Laboratory," Proceedings of the Fifth Conference on Recent Advances in Robotics, Boca Raton, Florida, May, 1992.
41. Yeralan, S. and M. El-Hafsi, "Recent Advances in Intelligent Machine Tools," Proceedings of the Fifth Conference on Recent Advances in Robotics, Boca Raton, Florida, May, 1992.
42. Sivazlian, B.D., K.-H. Wang, and S. Yeralan, "On Some Simulation Results for the G/G/R Machine Repair Problem with Warm Standby," *Proceedings of the Conference on Industrial Automation*, June 1992.
43. Yeralan, S., M. Liljenstam, M. Sandstrom, O. Wallquist, "A Visual Programming Language for Manufacturing Automation," *Proceedings of the Sixth Annual Conference on Recent Advances in Robotics*, pp 2:1-2:7, 1993.
44. Balaban, M. O., Y. Bergman, S. Yeralan, and W. S. Otwell, "Automated Quality Evaluation of Shrimp," *Proceedings of the Sixth International Conference on Engineering and Food*, May 23-27, Makuhari Messe, Japan, 1993.
45. Yeralan, S., "Research Opportunities for the Industrial Engineering Profession," 1993 ASEE Annual Conference Proceedings, Session 3257, Urbana, Illinois, June 1993.
46. Yeralan, S., M. O. Balaban, and E. Hamouda, "Automated Quality Assessment of Shrimp," *Proceedings of the International Conference on Industry, Engineering, and Management Science (IEMS94) Conference*, Cocoa Beach, FL, March 1994.
47. Balaban, M. O., Bergmann, Y., Yeralan, S. 1994, "Count and Uniformity Ratio Determination of Shrimp by Machine Vision," *Proceedings of the 5th International Conference in Computers in Agriculture*. February 6-9, 1994. Orlando, FL. pp 99-104, Published by ASAE, St. Joseph, MI.
48. Yeralan, S., and B. Tan, "An Architecture and Language for Fuzzy PLCs" *Proceedings of the International Conference on Industry, Engineering, and Management Science (IEMS94) Conference*, pp 167-171, Cocoa Beach, FL, March 1994.
49. Tan, B. and S. Yeralan, "Analysis of Multi-Station Production Systems" *Proceedings of the International Conference on Industry, Engineering, and Management Science (IEMS94) Conference*, pp 284-288, Cocoa Beach, FL, March 1994.
50. Yeralan, S., and S. Tufekci, "Multimedia Teaching of IE Practices" *Proceedings of the International Conference on Industry, Engineering, and Management Science (IEMS94) Conference*, Cocoa Beach, FL, March 1994.
51. Yeralan, S., G Norton, and B. Tan, "Analytical Models for Agent-Based Materials Handling Systems," *Proceedings of the 1994 Florida Conference on Recent Advances in Robotics*, pp 240-245, April, 1994.
52. Yeralan, S., and B. Tan, "A Formal Decomposition Methodology for Production Lines," *Proceedings of the Fourth International Conference on Computer Integrated Manufacturing and Automation Technology*, April 1994.
53. Yeralan, S., B. Tan, and S. Tufekci, "The Emulated Flexible Manufacturing Laboratory" *European Simulation Conference (ESS94)*.

54. Tan, B. and Yeralan, S. "A Decomposition Method for General Queueing Networks Subject to Blocking," In: Proceedings of the Ninth International Symposium on Computer and Information Sciences, Edited by S. Kuru, M.U. Çaglayan, E. Gelenbe, H.L. Akin, C. Ersoy, pp. 802-810, 1994.
55. Yeralan, S., Tan, B., and Tüfekçi, S. "Emulated Flexible Manufacturing Laboratory," In: Proceedings of the European Simulation Symposium ESS 94, A. R. Kaylan, A. I. Lehmann, T. Ören editors, vol. 1, p.196-198, 1994.
56. Yeralan, S. and Tan, B., "An Architecture and Language for Fuzzy PLCs," Proceedings of IEMS 94, p.167-171, 1994.
57. Tan, B. and Yeralan, S., "Analysis of Multi-Station Production Systems," Proceedings of IEMS 94, p.284-288, 1994.
58. Fowler, P., C. D. Baird, R. A. Bucklin, S. Yeralan, C. A. Watson and F. A. Chapman. 1994. Microcontrollers in Recirculating Aquaculture Systems. IFAS Fact Sheet EES-326.
59. Yeralan, S. B. Tan, G. E. Norton, and M. Fadiloglu, "The Impact of Intelligent Machine Tools on Production Operations Management and Control," Proceedings of the 1995 NSF Grantee's Conference, pp 301-302, La Jolla, CA, January 4-6, 1995.
60. Fowler, P., S. Yeralan, F. Zazueta, and R. Bucklin. 1996. Microcontrollers in Aquaculture. In: Proceedings of the 6th International Conference on Computers in Agriculture. Edited by: F. S. Zazueta, P. Martinez-Austria, J. Xin and N. H. Garcia-Villanueva. American Society of Agricultural Engineers, St Joseph, MI. pp140-146.
61. Yeralan S. 1996 "Embedded Control -A New Key Technology and its Possible Effects on Industrial Engineering Curricula ," Proceedings of the 1996 ASEE Annual Conference, Washington DC, Session 3257.
62. Fialho, F. B., P. A. Fowler, D. R. Bray, R. A. Bucklin, S. Yeralan, T. Tran and R. K. Braun. 1997. A Microcontroller Based System for Monitoring Vacuum Pulses in Milking Machines. ASAE Paper No. 97-FL100. ASAE, St. Joseph Michigan.
63. Fowler, P. A., R. A. Bucklin, C. D. Baird, S. Yeralan, C. A. Watson and F. A. Chapman. 1997. Flowrates and Pump Selection for Water Recycling Aquaculture Systems for Ornamental Fish Production. IFAS Fact Sheet EES-157.
64. Fowler, P. A., R. A. Bucklin, S. Yeralan, F. S. Zazueta, C. D. Baird, E. Lincoln and F. B. Fialho. 1998. Dynamic Modeling with Microcontrollers in Aquaculture. In: Proceedings of the 7th International Conference on Computers in Agriculture. Edited by: F. S. Zazueta, and J. Xin. American Society of Agricultural Engineers. St Joseph, MI. pp697-705.
65. Bray, D. R., P. A. Fowler, F. B. Fialho, R. A. Bucklin, S. Yeralan, T. Tran and R. K. Braun. 1998. An Automated System for Monitoring Milking System Parameters. In: Chastain, J. P., Ed. Proceedings of the Fourth International Dairy Housing Conference. ASAE Publication 01-98. American Society of Agricultural Engineers, St Joseph, MI 49085. pp17-24.
66. Yeralan S. and H. Emery, "Developments and Trends in Manufacturing Systems," Proceedings of the Third Aegean Conference on Design and Analysis of Manufacturing Systems, pp. 309-315, Tinos, Greece, May 2001.
67. Fowler, P. A., S. Yeralan, Y. Mu R. A. Bucklin, V. Y. Rygalov, R. M. Wheeler, and M. Dixon. 2002. Monitoring and control for artificial climate design. Paper 02ICES-2286. International Conference on Environmental Systems, July 2001. San Antonio, TX. Society of Automotive Engineers.
68. Mahoney, J. F., and S. Yeralan, "Average Run Length," Proceedings of the 32 nd International Conference on Computers and Industrial Engineering, August 11-13, 2003, University of Limerick, Ireland.
69. Mahoney, J. F., and S. Yeralan, "The Ranking of Airlines," Proceedings of the 16th International Conference on Flexible Automation and Intelligent Manufacturing, C1-061, June 26-28, 2006, University of Limerick, Ireland.
70. Yeralan, S. and D. Baker, "Sustainable Systems Engineering," Proceedings of the Frontiers in Education Conference, Paper 1100, October 18-21, 2009, San Antonio, TX.

71. D. Baker, E. Agar, and S. Yeralan, "International Summer Engineering Program at METU: A Bridge to Global Competency," Proceedings of the Frontiers in Education Conference, Paper 1038, October 18-21, 2009, San Antonio, TX.
72. S. Kayaligil, S., S. Yeralan, and K. Demirtas, "Approximate Performance Analysis of a Closed-Line with Random Failures and Aggregation of Segments," MOTSP Management Of Technology Step to Sustainable Production, June 2010, Bol, Brac, Croatia.
73. S. Yeralan, "A Roadmap Toward the Commercialization of Software Products," IX Conference on Stochastic Models of Manufacturing and Service Operations, May 25 - 30, 2013, Kloster Seeon, Germany.
74. E. Staiou, S. Yeralan, December 2013, "How can Total Quality Management Support STEM Education," International Conference on Quality in Higer Education, December 12-14, Sakarya, Turkey.
75. S. Yeralan and L. Kandiller, "Strategic Use of Real Time Data in Green Logistics," Proceedings of the 1st International Conference on Agrifood Supply Chain Management and Green Logistics, pp 385-392, May 27-30, 2015, Porto Carras, Greece.
76. D. Durmus and Yeralan, S., 2016. "Uretim ve servis sistemlerinin rassal modellerinde benzetim gecerlemesinin sinirlari," YAEM, July 13-15, 2016, Izmir, Turkey
77. Durmuş D., S. Yeralan, and C. Heavey, "Investigating the Potential of State-truncation Approximations for Production Lines," SMMSO June 4-9, 2017, Lecce, Italy.

Funded Research

1. "Add-on Automation Technologies for the Small Business," Small Business Administration, \$50,000 1983-1985.
2. Contributed to the development of the Manufacturing Program at the University of Missouri; partially sponsored by the Society of Manufacturing Engineers, 1983.
3. "Parts Orienting and Feeding Systems for Robotic Automated Assembly," Society of Manufacturing Engineers, \$10,000, co-director, 1985.
4. "Center for Applied Research in Electronics Manufacturing (CAREM)," co-principal investigator, Florida High Technology & Industry Council, \$30,000, 1988-1989.
5. "Continuous Flow Manufacturing," Studied and designed a new manufacturing facility for IBM to manufacture PS/2 computers; sponsored by IBM Inc, 1988.
6. Organized and lead the effort in developing the departmental applied industrial research laboratories. Worked with the University of Florida Foundation in attracting a \$150,000 equipment grant from IBM, Inc, 1989.
7. "On Automated Robotic Workplace Planning," National Science Foundation, co-principal investigator, \$60,000, 1989-1990.
8. "Decision Support System for Strategic Planning and Investment Justification At McDonnell Douglas Florida Missile Plant," McDonnell Douglas FMP, co-principal investigator, \$90,000.
9. "Reliability Modeling and Performance Evaluation," IBM, Inc. principal investigator, \$160,000, 1990-1993.
10. Designed and implemented computerized monitoring and control subsystems for metal cutting machine tools working as a member of the Machine Tool Research Institute, supported by the National Science Foundation, 1991-1993.
11. "Automated Shrimp Quality Assessment," Florida Sea Grant (federally funded) seed grant, co-principal investigator, 1991, \$4,800.
12. "Automated Shrimp Quality Assessment," Florida Sea Grant (federally funded), co-principal investigator, \$94,000, 1992-1995.
13. "Industrial Control Languages for Microcontrollers," Microchip Technology, principal investigator, \$25,000 in equipment and funds, 1991-1993.
14. "Flexible Emulated Manufacturing Laboratory," National Science Foundation, co-principal investigator, \$200,000, 1992-1995.
15. "Automated Poultry Weighing," Camli Yem, Izmir, Turkey, 10,000 TRL, 2014.

Graduate Students Supervised (Excludes Master's Project and High Honors Students)Doctoral Theses

1. S. E. Richart, "Analysis of Sequential Manufacturing Systems," 1985.
2. M. A. Quasem, "Analysis of Production Lines with Continuous Materials Flow," 1986.
3. D. J. Ramcharan, "An Event-Driven Architecture for Multiprocessor Industrial Control," 1992.
4. B. Tan, "Stochastic Models of Production Systems with Continuous Materials Flow," 1994.
5. M. Fadiloglu, "Models of Information Flow in Complex Multi-Agent Systems," Fall 1997.
6. S. Kirli, "Computational Solutions to Flow-Shop Scheduling," Spring 1998.

Master's Theses

1. K. Tofang-Sazi, "A General Solution Procedure for the Steady-State Probabilities of State-Homogeneous Production Line Models," 1984.
2. B. A. Singer, "Matrix Polynomial Solutions for Quasi-Birth-Death Processes," 1986.
3. H. C. Pai, "Inspection Attributes and Plans for Computer Vision Inspection," 1990.
4. S. Agarwal, "Industrial Applications of Neural Networks," 1990.
5. T. Larusson, "The Use of Computer Vision in Seafood Quality Inspection," 1991.
6. L. Steinberg, "An Industrial Engineering Support Network," 1992.
7. S. Babu, "Data-driven Automated Stochastic Model Building," 1992.
8. P. Kabouri, "Industrial Fuzzy Logic Control Systems," 1994.
9. E. Hamouda, "Adaptive and Computerized Quality Control," 1994.
10. S. R. Hasan, "A Template-Based Fuzzy Logic Code Generator for Microcontrollers," 1994.
11. A. E. Plager, "A Simulation Study of the Revised CONWIP Policy," 1994.
12. O. Ozarslan, "An Activity Network Model for Cost-Emergy Trade-Offs," 2009.
13. R. Ozdoglar, "Quantitative Methods for Evaluating the National Environmental Performance Index," 2009.
14. E. Gürsoy, "Scheduling End-of-Product-Life Recovery Activities," 2009.
15. S. Oruc, "Sustainability in the Publishing Industry," 2009.
16. E. Erdogan, "Complex Dynamical Systems Model of the Education Industry", 2009.
17. H. Cetinay, "Models of Synchronous Production Lines with No Intermediate Buffers," July 2010.
18. S. Roshany, "Approximate Formulas for the Performance Measures of Tightly Coupled Production Lines," 2014.
19. D. Durmus, "On the Applicability of Simulation as a Verification Tool for Markovian Models of Production Systems," 2016.

Master's Projects

1. O. S. Yacoub, "Robot Programming Languages," 1988.
2. J. E. Boyce, "Industrial Applications of Computer Vision", 1989.
3. J. E. Duff, "Automated Statistical Quality Control," 1989.
4. D. C. Bergman, "Computerized Quality Control," 1989.
5. R. Caralieros, "Machine Vision Languages," 1988.
6. J. Boyce, "Automated Inspection," 1988.
7. C.-Y. Tsai, "Artificial Neural Networks," 1988.
8. C.-T. Gan, "Graphical Operator Interfaces," 1989.
9. K-Y. Park, "Embedded Control Languages", 1990.
10. C.-L. Lin, "Object-Oriented Robot Programming Languages," 1990.
11. J. Kramer, "Knowledge Engineering Methods for Production Scheduling," 1990.
12. S. Ray, "Intelligent Materials Handling Systems," 1990.
13. D. F. Cole, "Robotic Workplace Design," 1991.
14. M. Nthangeni, "Stochastic Models of Production Systems," 1991.
15. R. A. Ellis, "A Dynamic Link Library Solver for Markov Processes", 1994.
16. H.-N. Jou, "Fuzzy Logic Control for Scheduling," 1994.
17. C.-J. Chiang, "Computerized Acceptance Sampling Planner," 1994.
18. B.-J. Her, "Computerized Reliability Modeller," 1994.
19. G. E. Norton, "Agent Based Materials Handling," 1994.

Exchange Students

(Master's projects by students from the Royal Institute of Technology, Sweden, under a special exchange program)

1. R. Arrestam and J. Holmlund "A High-Level Control Language and Compiler for Embedded Controllers," 1991.
2. M. Liljenstam, M. Sandstrom, and O. Wallquist, "A Visual Programming Language for Microcontrollers," 1992.
3. W. Fredholm and D. Gronquist, "Visual Fuzzy Control," 1993.
4. R. Allgath and T. Karlsson, "Visual Plotting Tool - A General Purpose Plotting Module," 1993.
5. D. Manday, "A High-Level Programmable Array Logic Language for General Purpose Embedded Controllers," 1993.
6. G. Mansourian, "A Nested Neural Network with Applications in Manufacturing Process Monitoring and Control," 1994.
7. V. Jonesco and J. Olofsson, "Fuzzy Programmable Logic Control," 1994.

Courses TaughtUniversity of Missouri - Columbia (1982-1986)*Undergraduate Courses*

IE 307	Methods of Operations Research, Fall 1984
IE 381	Industrial Systems Design II, Winter 1986
IE 384	Industrial Process and Distribution Control Systems, Winter 1984, Winter 1985, Winter 1986.
IE 387	Linear Programming, Summer 1983, Fall 1983.
IE 397	Models of Operations Research, Winter 1983.

Graduate Courses

IE 431	Stochastic Service Systems, Winter 1983, Winter 1984, Winter 1985.
IE 440	Advanced Evaluation of Engineering Data, Fall 1983, Fall 1984, Fall 1985.
IE 475	Inventory Control Systems, Summer 1983, Summer 1985.

Noncredit Short Courses

Value Engineering, St. Louis, MO, February 1985.

Automated Workstation Design, developed, October 1986.

Major Course and Laboratory Development

IE 307	Methods of Operations Research.
IE 384	Industrial Process and Distribution Control Systems.
Laboratory	Industrial Process and Distribution Control Systems Laboratory. Manufacturing Program at the University of Missouri, partially sponsored by the Society of Manufacturing Engineers, 1983.

University of Florida (1987-2008) (F:fall, Sm:summer, Sp:spring)*Undergraduate Courses*

ESI 3154	Production Control Computer Programming, F87
ESI 4161	Industrial Applications of Microprocessors, Sp88, Sm88, F88, Sp89, Sm89, F89, Sm90, F90, Sp91, Sm91, F91, Sm92, F92, F93, F94, Sp95, F95.
ESI 4221	Industrial Quality Control, F88.
ESI 4365	Facilities Planning and Layout, Sm87.
ESI 4568	Transform Methods, F94.

Graduate Courses

ABE 6933/5032	Programming and Interfacing High-Performance Microcontrollers, F98, F99, F00, F01, F02, F03, F04, F05, F06, F07.
ESI 5236	Reliability Engineering, Sp92.
ESI 6154	Advanced Production Control Computer Programming, F87, F95.
ESI 6162	Advanced Industrial Applications of Microprocessors, Sp88, Sm88, F88, Sp8, Sm89, F89, Sm90, F90, Sp91, Sm91, F91, Sm92, F92, F93, F94, Sp95, F95.
ESI 6222	Advanced Quality Control, Sm88.
ESI 6337	Markov Processes and Queueing Theory, Sp88, Sp89.
ESI 6805	Systems Analysis I, F91.
ESI 6912	Knowledge Engineering in Service and Manufacturing Industries, F90.
ESI 6912	Applied Probability Methods in Engineering, Sp93, Sp94, Sp95.
<i>Major Course and Laboratory Development</i>	
ESI 4161/6162	Industrial Applications of Microprocessors, 1987-1997. The course was continually being revised and updated. It has evolved through PASCAL, microcontrollers, PLCs, C, C++, and MS Windows.
ESI 6154	Advanced Production Control Computer Programming, Fall 1995. High-performance embedded control, distributed industrial control, networking architectures (I ² C, ACCESS bus, CAN bus), visual programming, automated code generation.
ESI 6805	Systems Analysis I, Fall 1991. Microcontrollers, developing assemblers and compilers, embedded applications.
ESI 6912	Knowledge Engineering in Service and Manufacturing Industries, Fall 1990. Expert systems, genetic search, taboo search, and simulated annealing.
ESI 6912	Applied Probability Models in Engineering (masters core course), 1992. Probability and statistics, forecasting, reliability, quality control, queueing, Markov processes.
Laboratory	Industrial Research Laboratories, received about \$500,000 of equipment grants and donations from industry, 1988

Middle East Technical University (2008)

Graduate Courses

OR 519	Mathematics for Operations Research, Spring 2008. A review of linear algebra, calculus, probability concepts, stochastic processes.
IE 719/715	Sustainable Systems Engineering, Fall 2008. Sustainability, post-globalization, engineering models, environmental cycles, international relations, ethics, modeling complex dynamical systems, OR methods for sustainability.

Undergraduate Courses

IE 499	Sustainable Systems Management, Spring 2009. Sustainability, post-globalization, economics, finance, environmental cycles, international relations, ethics, modeling complex dynamical systems, OR methods for sustainability.
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Graduate Courses

IE 719/715	Sustainable Systems Engineering, Fall 2008. Sustainability, post-globalization, economics, finance,
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environmental cycles, international relations, ethics, modeling complex dynamical systems, OR methods for sustainability.

Major Course and Laboratory Development

IE 499, IE 719/715 Sustainable Systems Engineering and Sustainable Systems Management were developed by support from TUBITAK (The Technological and Scientific Research Counsel of Turkey, equivalent to the NSF in the United States).

USF Polytechnic (2011-2013)

Undergraduate Courses

PHY 1401 Science and Society, Fall 2012.
Philosophy of science, social and cultural aspects.
EGN 3835 Globalization and Technology, Spring 2012, Summer 2012, Fall 2012, Spring 2013.
Globalization, technology, sustainability, social, environmental, and economics of globalization.
ESI 4312 Deterministic Methods in Operations Research, Fall 2012.
Linear and non-linear programming, network flows, optimization, inventory control.
ESI 4313 Probabilistic Methods in Operations Research, Spring 2011.
Markov processes, queueing theory, decision trees.
EIN 4352 Engineering Cost Analysis, Spring 2013.
Cost analysis, estimation and evaluation of engineering design in service and manufacturing organizations.
EIN 4905 Open-source software tools for industrial engineering and operations research, Summer 2012.

Major Course and Laboratory Development

EIN 4905 Open-source software tools for industrial engineering and operations research.

Yasar University (2013 - present)

Undergraduate Courses

ENGR 101 Analytical Thinking (large on-line course), Fall 2016.
IENG 110 Basic Concepts of Probability and Statistics in Law, Fall 2016.
IENG 111 Foundations of Analytical Reasoning, Fall 2014, Fall 2015, Fall 2016.
IENG 121 Introduction to Industrial Engineering, Fall 2014.
IENG 122 Algorithms and Computation in Engineering, Spring 2014, Spring 2015, Spring 2016.
IENG 212 Engineering Statistics, Spring 2014.
ENGR 300 Engineering Ethics, Spring 2017.
IENG 441 System Analysis, Fall 2013, Fall 2014, Fall 2015, Fall 2016.
IENG 442 System Design, Spring 2014, Spring 2015, Spring 2016.
IENG 453 Open Source Software Tools for Industrial Engineering, Spring 2014.
IENG 460 Advanced Topics in Industrial Engineering I, Fall 2013.
ENG 440 System Science and Engineering, Fall 2016.
ENG 472 Sustainable Systems Engineering, Fall 2016.

Graduate Courses

UFND 500 Research Methods and Ethics, Spring 2017.
IENG 532 System Modeling and Simulation, Fall 2013.
IENG 610 Philosophy of Science, Engineering and OR, Fall 2013, Fall 2016.
IENG 666 Performance Analysis of Production Systems, Spring 2015.

Major Course and Laboratory Development

ENGR 101	Analytical Thinking (large on-line course)
ENG 440	System Science and Engineering (large on-line course)
ENG 472	Sustainable Systems Engineering

University Committee Activities

1988-1997	Manufacturing Systems Engineering Coordinator.
1988-1997	Statistics Committee.
1988-1990	Undergraduate Studies and Admissions.
1988-1989	Scholarship and Awards Committee.
1989-1997	Equipment and Physical Plant.
1989-1990	Faculty Search Committee.
1990-1997	Patent Committee.
1990	Commencement Marshall.
1990-1993	College Curriculum Committee.
1990	IIE University Chapter Advisor.
	ABET, editorial review, METU.
2015-present	MUDEK (ABET equivalent), Director, College Coordination Committee.

Service Activities

1990	Member, NSF ERC review committee.
1989-1991	Reviewer, NSF Research Proposals.
Reviewer for Journals: Institute of Industrial Engineers Transactions, European Journal of Operational Research, International Journal of Production Research, Journal of Manufacturing Systems.	
1993	Member, Food Processing Automation Conference III Executive Committee.
October 2013	Organizer, Workshop on The Philosophy of Engineering, Yasar University.
2013, 2015	Reviewer, Turkish Ministry of Science, Industry, and Technology.
2013-to date	Recruitment.
2014-to date	Associate Editor, Stem Cell Fundamentals and Practice, www.cellstem.org .
2016	Master of Ceremonies, YAEM 2016.
2016-to date	Editorial Board Member , MUK Publications, (http://www.mukpublications.com/).

Recent Invited Talks and Keynote Speeches

(Only selected talks are listed below. More may be viewed at <http://www.yeralan.org/seminars>.)

1. "Internet-Based Ubiquitous Industrial Automation, Monitoring, and Control," Computers and Industrial Engineering, Limerick Ireland, 2003.
2. "Embedded Control," Koc University, Istanbul, Turkey 2004.
3. "A Straight Talk on Curved Space," Department of Philosophy Workshop, METU, Ankara, Turkey, December 2005.
4. "Industrial Engineering and Open-Source Software," METU, Ankara, Turkey, December 28, 2005.
5. "Modeling in Engineering," METU, Turkey, December 7, 2007.
6. "Modeling in Engineering," Bilkent University, Turkey, December 28, 2007.
7. "Post-globalization and Industrial Engineering," Aristotle University, Thessaloníki, Greece, February 21, 2008.
8. "Globalization and Opportunities in the Post-Globalized World," Bogazici University, March 11, 2008.

9. "Opportunities in Smart Agriculture of the Post-Globalized World," Panel: Turkey: A Model for Organic Products, European Union Network of Excellence 'Dynamics of Institutions & Markets in Europe' (DIME) SAL 3 , (6th Framework Science & Technology Programme), April 7, 2008, Izmir, (<http://www.dime-eu.org/sal3/workshops/turkey>)., Aegean Exporters Association.
10. Linux Workshop, METU, July 2008.
11. "Sustainability," Bi-weekly seminar series at METU, January-May 2009.
12. "The Hype, Science, Technology, and Academics of Sustainability," Koc University, Istanbul, Turkey, May 2009.
13. "Towards Sustainability," AEGEE European Union Youth Group <http://www.aegee.org>, Ankara, Turkey, July 2009.
14. "Sustainability", a 20-hour workshop, Zhengzhou University, Henan China, July 2009.
15. "After the Big Picture," TED Conference [Technology-Entertainment-Design], Istanbul, Turkey, November 2009 (www.ted.com, www.ted.com/tedx/events/204).
16. "Modeling Nonlinear Systems Dynamics," University of Limerick, Ireland, December 2009.
17. "Sustainability," keynote speaker, [First International Conference on Sustainable Life in Manufacturing](#) (SLIM 2010), June 24-26, in Egirdir, Turkey.
18. "Sustainability, Production, and Models," invited speaker, [VIII. Conference on Stochastic Models of Manufacturing and Service Operations](#), May 28 - 02 June, 2011, Kusadasi, Turkey.
19. "New Software Strategies," keynote speaker, [2011 MMO EMYK](#) Conference September 29 - October 1, 2011, Izmir, Turkey.
20. "Sustainability Performance Evaluation of Machine Tools," keynote speaker, [MIT & SLIM 2011 Conference](#), September 2011, Slovenia.
21. "The Past, Present, and Future of Turkish Manufacturing Industries," keynote speaker, <http://sempozyum.sdu.edu.tr/slim2012/>, October 2011, Turkey.
22. [The Philosophy of Engineering Workshop](#), (as organizer and moderator), Yasar University, Izmir, Turkey, December 10, 2013.
23. "Systems Strategies for Tourism," panelist, Alanya HEP University, November 20, 2014, Alanya, Turkey.
24. "Management of Higher Education," panelist, Alanya HEP University, May 7, 2015, Alanya, Turkey.
25. "Chaos and Systems," The University of South Africa (UNISA), Pretoria, South Africa, September 21, 2015.
26. The talk centered on the use of chaos-theory-inspired new paradigms in modeling and analyzing stochastic models of manufacturing and service systems.
27. "Are Systems Thinking and OR Incompatible?" Bogazici University, Istanbul, Turkey, March 2, 2016.
28. [Science Unites All](#) Conference and Fair, a [Marie Skłodowska Curie \(MSCA\)](#) action under the [EU Framework Programme for Research and Innovation Horizon 2020](#), Izmir, Turkey, September 30, 2016.
29. [EaZy Days](#) panelist, open access publications, Izmir, Turkey, October 3, 2016.
30. "Systems Science and Engineering ," International University of Sarajevo, Bosnia-Herzegovina, March 3, 2017.

Recent Public, Media, and Popular Science Activities

(Only selected media appearances are listed)

1. "Volunteerism," Open Radio, Istanbul, August 2006.
2. "Technology and Post-globalization," The Cafe Finance Program, CNBC TV, Istanbul, August 2006.
3. "Science and Society," a weekly radio show on Radio METU (www.radyoodtu.com.tr) November 2007 to June 2008.
4. Webmaster, www.sustainabilityengineering.org, under construction.
5. Sustainability Video Series, shown at various festivals and public events, to be compiled at the web-site www.sustainabilityengineering.org.
6. Alanya University Founders' Meeting," Alanya, Turkey, April 18, 2008.
7. "HDR Photography (in Turkish)," Bilim ve Teknik (Turkish popular science magazine), September 2008.
8. Underwater Science Camp, TUBITAK, Kas, Turkey, July 2008.
9. "Solar Energy," METU Alumni Association, January 31, 2009.
10. "Sustainability," Ankara Science High School, March 4, 2009.
11. ART TV, Guest expert on sustainability, May 5, 2009.
12. ART TV, Guest expert on sustainability, June 23, 2009.
13. "Growth [versus]and] Stability," ESTIEM Magazine (European Students of Industrial Engineering and Management), vol. 38, Spring 2010.
14. "Thoughts on Modern Instantaneous Global Communications," ESTIEM Magazine (European Students of Industrial Engineering and Management), vol. 40, Spring 2011.
15. "Systems Modeling: A Tool for the Times," ESTIEM Magazine (European Students of Industrial Engineering and Management), vol. 41, Sumer 2011.
16. TV 360, guest on "Ekonomi Gundemi," November 28, 2014 (<http://www.youtube.com/watch?v=At71VgGMtDY>).
17. "Sustainability in Design," The Second Istanbul Design Biennial, November 29, 2014, (<http://2tb.iksv.org/index.asp>).
18. "Stochastic Models of Manufacturing and Service Systems," University of South Africa, Pretoria, South Africa, September 21, 2015.

Conference Presentations

1. Chalmet, L. G., R. L. Francis and S. Yeralan, "A Semidynamic Network Model for Building Evacuation," ORSA/TIMS Joint National Meeting, May, 1980.
2. Muth, E. J., J. F. Mahoney and S. Yeralan, "Effect of Buffer Size on Productivity of Work Stations that are Subject to Breakdown," ORSA/TIMS Joint National Meeting, May, 1981.
3. Yeralan, S., and E. J. Muth, "A General Model of a Production Line with Intermediate Buffer and Station Breakdown," ORSA/TIMS Joint National Meeting, April, 1983.
4. Yeralan, S., C. A. Chang and R. S. Dheri, "Models of Parts Orienting and Feeding Systems for Automatic Production Lines," ORSA/TIMS Joint National Meeting, November, 1983.
5. Yeralan, S., E. J. Muth and K. Tofang Sazi, "A Solution Procedure for the Steady-State Probabilities of State Homogeneous Production Line Models," ORSA/TIMS Joint National Meeting, November, 1983.
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BUSINESS (1989-2009)

The 1980s were exciting times for business. The introduction of information technologies allowed business model and life style changes. Sencer Yeralan, having developed and taught courses in embedded control, formed a small private company (Rigel Corporation) to develop hardware and software products, but mostly to experience the unfolding changes in business and society. The "technology" company, although small in scope, has undertaken many substantial projects. Moreover, working with overseas companies allowed first-hand experiences in globalization and international cooperation. Relations with some companies grew to long-term relationships, once again, a trademark development of the business in that period.

Dr. Yeralan designed all of the hardware and personally wrote most of the software. Working with semiconductor manufacturers, the product line was especially useful in technology transfer to industry and universities. Since its introduction in the late 1990s, the 8051 development environment READS is being used by many educational institutions as the default development system. Accordingly, almost all software products were free of charge (a practice common today), while Dr. Yeralan took opportunities to write five (5) textbooks and many magazine articles to promote the use of microcontrollers. Most notably, the "Common Sencer" corner of the Siemens Microelectronics Magazine.

Although as an engineer, Dr. Yeralan designed and developed almost all Rigel products, the most significant experience from the Rigel years is in the opportunities to have been involved in the expansion of globalization, the integration of the Internet into the business (Rigel was one of the first companies on the net), business practices such as long-term partnerships, virtual companies, and ISO quality certifications.

Detailed Description

A detailed description of activities, hardware and software products designed, developed, and deployed is available upon request.