

## **Fabrycky - CURRICULUM VITA - December 2018**

**Wolter Joseph Fabrycky**, Principal and Chairman, Academic Applications International, Inc., Blacksburg, Virginia 24060 USA • Lawrence Professor Emeritus of Industrial and Systems Engineering, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, 24061.

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Born December 6, 1932 in Springfield, Queens County, New York.

### **Degrees and Registrations**

B.S. in Industrial Engineering, Wichita State University, 1957 • M.S. in Industrial Engineering, University of Arkansas, 1958 • Ph.D. in Engineering (Industrial Engineering and Management Option), Oklahoma State University, 1962.

Registered Professional Engineer since 1960 in Arkansas (by examination), 1962-68 in Oklahoma, and since 1965 in Virginia (No. 3590).

### **Academic Appointments**

University of Arkansas - Full-Time Instructor in Industrial Engineering and Engineering Fundamentals, 1957-60.

Oklahoma State University - Assistant Professor of Industrial Engineering and Management, 1962-63 • Associate Professor (with tenure), 1963-65.

Virginia Polytechnic Institute and State University - Associate Professor of Industrial Engineering, 1965-66 (no tenure) • Professor of Industrial Engineering and Operations Research, 1966-88 (tenured) • John L. Lawrence Professor of Industrial and Systems Engineering, 1988-95 (Emeritus, 1995-present) • Senior Research Scientist, 1995-99.

Major advisor for approximately 80 M.Eng. and M.S. degree recipients and major professor for 12 Ph.D. recipients at Oklahoma State and at Virginia Tech, 1962-98.

### **Administrative Experience**

Oklahoma State University - Director, Operations Research Group, 1963-65.

Virginia Polytechnic Institute and State University - Director, Operations Research Center, 1966-70 • Acting Head, Department of Industrial Engineering, 1966-67, awaiting Torgersen • Founder and Chairman, Interdisciplinary Graduate Program in Systems Engineering, 1969-75 • Associate Dean of Engineering, 1970-75 • Acting Assistant Vice President for Academic Affairs, 1975-76 • Dean, University Research Division, 1976-82.

## **Research Experience**

Oklahoma State University - Secured and conducted research under grants and contracts from the American Society of Tool and Manufacturing Engineers (1963-64, \$2,800), the OSU Energy Research Group (1964-65, \$4,000), the National Science Foundation (1964-65, \$10,000), and the Boeing Company (1964-65, \$17,400).

Virginia Polytechnic Institute and State University - Secured and directed grants and contracts to support the NASA Bioastronautics Space Conference (1967, \$19,750), the VAF Consumer Protection Project (1969, \$10,000), the NASA Graduate Study / Research Program in Aeronautics and Air Transportation Systems (1972-76, \$389,000), the NSF Energy Related Graduate Traineeship Program (1974-76, \$157,400), the HEW Domestic Mining, Mineral, and Mineral Fuel Conservation Fellowship Program (1975-76, \$33,800), and the IBM Manufacturing Systems Engineering Curriculum Project (1982-83, \$6,000) • Conducted research under grants and contracts from NSF/PR (1984-85, \$25,600), DOE/MSL (1984-86, \$38,300), Navy/NESC (1984-86, \$50,000), SOLE (1985-86, \$2,000), CIT/IBM (1984-87, \$110,000), USAF/TRW (1987-88, \$272,000), CIT/NT (1987-93, \$220,000), NASA/HU (1990-93, \$130,000), NSF/DMS (1991-93, \$25,000), Loral Federal Systems (1994-95, \$36,500), VT/RD/CORE (1987-95, \$140,000), Powertronic Systems (1991-96, \$81,400), CIT/SPC (1994-97, \$105,000), USAF Rome Labs/SPS (1994-98, \$164,900), and NSF/DEI (1996-98, \$43,500).

## **Continuing Education Experience**

University of Arkansas - Developed a Correspondence Course on Industrial Cost Control for the Office of Continuing Education, 1960.

Oklahoma State University - Conducted sessions on the Economic Evaluation of Alternatives in the Methods Engineering short courses, 1962-64 • Contributed one session to the Energy Conversion and Storage Conference, 1963 • Conducted sessions on Mathematical Analysis in Business and Industry in the Management Development short courses, 1963-65 • Organized and conducted the 1964 and 1965 OSU Operations Research Conferences and presented sessions.

Virginia Polytechnic Institute and State University - Organized and hosted the 1966 Operations Research Workshop and presented sessions • Organized and directed the 1967 NASA Bioastronautics Space Conference • Developed and co-presented 15 Educational TV lectures on Operations Economy through NCSU, 1967 • Developed and presented 10 conferences on Production Control in Virginia and North Carolina, 1967-68 • Developed and co-presented short courses on Statistical Quality Control and Industrial Operations Research in Virginia and North Carolina, 1968-69 • Organized and conducted sessions in the 1969, 1970, and 1971 Management Science Symposia • Presented a session on Economic Evaluation in the UCLA-VT Hydrocarbon Fuels short course, 1977 • Organized and presented sessions in 5 Cost-Effectiveness short courses and 10 Economic Decision Analysis short courses, 1971-80 • Organized and co-presented a short course on Applied Operations Research and Management Science, 1984 • Organized and coordinated the

NSF Research Planning Conference on Engineering Economics, 1984 • Organized and presented sessions in the 1988, 1989, and 1990 Research Planning Workshops on Life-Cycle Engineering • Organized and presented short courses on Life-Cycle Cost and Economic Analysis, 1990 and 1992 • Organized and presented a short course on Systems Engineering Models and Tools, 1991 • Presented Engineering for Total Quality in the TAM Program by Satellite TV, 1991 • Organized the Computer Tools Workshop at FAIM 1992 • Presented two Seminars on Life-Cycle Cost Analysis, CIA, 1992-93 • Conducted the Systems Engineering Executive Overview, NSA, 1993 • Developed, updated, and presented Professional Engineering exam review sessions on Engineering Economics by Satellite TV, 1986-06.

### **Industrial Experience**

Machinist (part-time), 1953-54, Bradshaw Machine Company, Wichita, Kansas • Draftsman through Junior Design Engineer (released-time), 1954-57, Cessna Aircraft Company, Wichita, Kansas • Design Engineer (summer faculty programs), 1958 and 1959, Chance Vought Aircraft Company, Dallas, Texas • Operations Research Analyst (summer faculty program), 1960, US Air Force, OCAMA, Oklahoma.

### **Consulting Experience**

Editorial Consultant, 1964-present, Prentice Hall, Upper Saddle River, New Jersey • Co-editor, Prentice Hall International Series in Industrial and Systems Engineering, 1972-present, and Engineering and Systems Management, 1993-present (both with J. H. Mize through 2009).

Electronic Data Processing, 1961, Ethyl Corporation, Baton Rouge, Louisiana • Principal Engineer, 1962-65, Brown Engineering, Huntsville, Alabama and Cape Kennedy, Florida • Academic Advisor for Operations Research, 1964-65, Brevard Engineering College (now FIT), Melbourne, Florida • Production Systems Design, 1966, Inland Motors Corporation, Radford, Virginia • Production Cost Analysis, 1967, Roanoke Electric Steel, Roanoke, Virginia • Operations Research, 1967, Forest Products Marketing Laboratory, Princeton, West Virginia • Construction Cost Analysis, 1969, E. C. Ernst, Decatur, Alabama • Systems Engineering, 1974, SAAB-SCANIA, Linkoping, Sweden • Industrial Management Graduate Program, 1974-80, Universidad Rafael Landivar, Guatemala, C.A. • Publications Review, 1980, J.B.F. Scientific, Wilmington, Massachusetts • Systems Design Process, 1982, TRATEC/IBM, Bethesda, Maryland • Emerging Engineering Systems, 1985-86, NSF, Washington, DC • Systems Engineering, 1987, King Fahad University of Petroleum and Minerals, Dhahran, Saudi Arabia • Corporate Strategies, 1986-87, Tocqueville Research, New York, NY • Planning Engineering Computing, 1988, TRATEC/IBM, Los Angeles, California • Life-Cycle Engineering Design, 1988, McDonnell Douglas, Mesa, Arizona • Quality Assurance, Organization of American States for Brazil, 1991, Washington, DC • Design and Computer Integrated Engineering, NSF, 1991, Washington, DC • Systems Engineering, NWTRB, 1991-93, Washington, DC • Systems Engineering, WHC, Richland, Washington, 1992-94 • Nuclear Cleanup Affordability, NRC, Washington, DC, 1994-96 • SE/CMM Development, SEI, Pittsburgh, Pennsylvania, 1995 • China Technology Assessment, SAIC, Washington, DC, 1996 • Scientist Selection Panel, US Navy, 1997 • Technical Advisory Committee, SPC, 1994-97 • Systems Engineering, WPI,

Morgantown, West Virginia, 1996-97 • Market and Business Orientation in Engineering, 1997-98, Siemens, AG, Munich, Germany • Technology Program Review ONR/ECS, Dahlgren, Virginia, 1998 • Integrated Manufacturing Fellowships Program, NRC/DOE, 1993-03.

SE Academic Program Development at several institutions: University of Exeter (UK), 1995-00; Portland State University, 1997-02; University of Zielona Gora (Poland), 1998-08; US Air Force Institute of Technology, 2005-06; Keio University (Japan), 2006-10; US Air Force Academy, 2007-09; US Naval Postgraduate School, 2009; Stevens Institute of Technology, 2000-10.

### **Professional Societies and Activities**

Accreditation Board for Engineering and Technology (ABET) - Member, Board of Directors (as INCOSE designee), 2008-14 • Member, International Activities Advisory Committee, 2009-10 • Member, Global Council, 2010-14.

American Society for Engineering Education (ASEE) - Fellow, 2007-present • Life Member, 1995-present and Member, 1958-present • Imhoff Award Committee, 2008-10 • Directory Policy Committee, 1999-02 • Member, McGraw Research Award Committee, 1980-83, and Chairman, 1981-83 • Member, Society Nominating Committee, 1978-80 • Society Vice President (Institutional Councils), 1977-78 • Member, Society Board of Directors, 1976-78 • Vice-Chairman, 1974-76, Chairman, 1976-78, and Nominating Committee, 1978-80, of the Engineering Research Council • Chairman, Engineering Research Council Publications Committee, 1974-76 • VPI&SU Representative to the Engineering Research Council, 1970-78 • Society Publications Committee, 1974-76 and Publications Policy Committee, 1972-74 • Vice-Chairman, 1969-70, Chairman, 1970-71, and Board of Directors, 1971-74, of the Engineering Economy Division.

International Council on Systems Engineering (INCOSE) - Charter Member No. 21, 1991-present • Fellow, 1999-present • Inaugural Benefactor Award, 2013 • ABET Accreditation Liaison, 2000-08 • ABET Board Designee, 2008-present • Chairman, INCOSE / Stevens Doctoral Award Program, 2001-06 • Associate Editor and Member of the Editorial Board, *Journal of Systems Engineering*, 1998-2013 • Pioneer Award (team with Ben Blanchard), 2000 • Co-Chairman, Academic Forum, 1996 • Co-Chairman, Honors and Awards Committee, 1995-97 • National Director and Board of Directors, 1995-97 • Co-Chairman, Education and Research Committee, 1992-94.

Institute of Industrial and Systems Engineers (IISE) - Fellow, 1978-present • Life Member, 1995-present • Senior Member, 1961-78 • Associate Member, 1958-61 • Institute Director for Research, 1990-91 • Member, Education Policy Board, 1990-91 • Department Editor, *IIE Transactions*, 1988-90 • Professional Engineering Examination Committee, 1984-90 • Institute Executive Vice President (Divisions, Education, and Publications), 1982-84 • Member, Executive Committee and Board of Trustees, 1982-84 • Member, Institute Nominating Committee, 1981-82 • Institute Vice President (Systems and Technical Divisions), 1974-77 • Member, Board of Trustees, 1974-77 • Editorial Committee for *Industrial Engineering*, 1974-75 • Board of Directors, 1968-71, President, 1967-68, and Vice President, 1966-67, of the Western Virginia Chapter • Institute Research and

Development Council, 1966-68 • Institute Terminology Committee, 1963-65 • Faculty Advisor at the University of Arkansas, 1958-60.

Operations Research Society of America (ORSA) - Member, 1962-96 • Associate Member, 1960-1962.

National Council of University Research Administrators (NCURA) - Member, 1976-81 during appointments Dean of the Virginia Tech Research Division.

Society of Logistics Engineers (SOLE) - Member, 1969-72, and 1991-2001.

### **Academic Philanthropic Societies**

Member of the Virginia Tech Ut Prosim Society and Life Member of the Virginia Tech Educational Foundation, 1995-present • Member of the Virginia Tech Legacy Society, the Oklahoma State University Heritage Society, the University of Arkansas Heritage Club, and the Wichita State University Society of 1895, all from 2008-present • Inaugural Benefactor Award, International Council on Systems Engineering, 2013.

### **Honor Societies and Activities**

Alpha Pi Mu - Member since 1960 • OSU Faculty Advisor, 1962-64 • Virginia Tech Faculty Advisor, 1982-88 • Regional Vice President and National Executive Council, 1993-2008 • Executive Vice President and National Executive Council, 2008-10 • President and Executive Council Chairman, 2010-12 • Past President and National Executive Council, 2012-present.

Omega Alpha: The International Systems Engineering Honor Society - Founder and Organizer, 2005 • President, 2006-2016 • President Emeritus, 2016-present • Lead, Systems Engineering Doctoral Dissertation Showcase, 2016-present.

Society of the Sigma Xi - Emeritus Member, 1995-present • Member since 1963.

Tau Beta Pi - Member since 1974 • Induction through Sigma Tau at Oklahoma State, 1962-74.

Order of the Engineer - Inducted when serving as a member of the IE Board of Trustees, 1976.

### **Honorary Recognitions and Awards**

- 1) Fellow, American Society for Engineering Education (ASEE), Elected in 2007.
- 2) Fellow, International Council on Systems Engineering (INCOSE), Elected in 1999.
- 3) Fellow, American Association for the Advancement of Science (AAAS), Elected in 1980.
- 4) Fellow, Institute of Industrial Engineers (IIE), Elected in 1978.

- 5) Elected to the Industrial Engineering and Management Academy of Distinguished Alumni, Oklahoma State University, 2018.
- 6) Elected to the Arkansas Academy of Industrial Engineering in 1989 • Named a John L. Imhoff Fellow in 1999.
- 7) Elected to the Virginia Academy of Sciences in 1966 • Emeritus Member, 1998-present.
- 8) Received the Wellington Award for Outstanding Contributions to the field of Engineering Economy, ASEE / IIE, 2004.
- 9) Received the Armitage Medal for Outstanding Contributions to the Logistics Engineering Literature, Society of Logistics Engineers, 2004.
- 10) Received the Inaugural Benefactor Award, International Council on Systems Engineering, at IS 2013.
- 11) Received the Pioneer Award (joint with B.S. Blanchard), International Council on Systems Engineering, INCOSE, 2000.
- 12) Received the Eugene L. Grant Award for the best paper in Volume 39 of *The Engineering Economist*, ASEE / IIE, 1994.
- 13) Received the H. B. Maynard Book of the Year Award for *Industrial Operations Research* (with P. M. Ghare and P. E. Torgersen), American Institute of Industrial Engineers, 1993.
- 14) Received the Melvin R. Lohmann Medal for distinguished contributions to Industrial and Systems Engineering Education, Research, and Publications, College of Engineering, Architecture, and Technology, Oklahoma State University, 1992.
- 15) Received the Albert G. Holtzman Distinguished Educator Award, Institute of Industrial Engineers, 1990.
- 16) Member, Program Planning Committee, Conference on Complex System Design and Management, Cite Universitaire International de Paris, France, 2010, 2011, and 2012.
- 17) Member, International Advisory Committee, System Design Program, Graduate School of Science and Technology, Keio University, Japan, 2006-12.
- 18) Member, Scientific Program Committee, Engineering Design in Integrated Product Development (EDIProD), Polish Academy of Science, Section of Engineering Design, 1998-06.
- 19) Designated (with B.S. Blanchard) as the names-sake for the annual Stevens Doctoral Award in Systems Engineering, 2008–present.

- 20) Member, Advisory Board for the School of Systems and Enterprises (was SE/SDOE Program), Stevens Institute of Technology, 2000-10.
- 21) Member, Systems Engineering Advisory Committee, Portland State University, 1999-04, and also Distinguished Visiting Professor, 1999-04.
- 22) Visiting Professor, MIRCE Academic Center, University of Exeter, Exeter, United Kingdom, 1995-00.
- 23) Invited Lecturer, *Systems Engineering Summer School*, Poznan Technical University, Poznan, Poland, August 1995.
- 24) Invited Visiting Scientist, Universidade Federal de Santa Catarina, Florianapolis, Brazil, sponsored by the Organization of American States, March 1991.
- 25) Guest Lecturer, 1969-76, U. S. Army Logistics Management Center, Fort Lee, Virginia • Named an Honorary Faculty Member in 1970.
- 26) Member, Scientific Advisory Board, Corporate Research Center, Virginia Polytechnic Institute and State University, 1994-00.
- 27) Outstanding Service Awards - International Council on Systems Engineering, 1995 and 1998 • Institute of Industrial Engineers, 1977 and 1984.
- 28) Listed in current and past editions of Who's Who in America • Who's Who in Engineering • American Men and Women of Science • Dictionary of International Biography.
- 29) Order of the Engineer (inducted in 1971 as a member of the IIE Board of Trustees) • Outstanding Educators of America, 1971 designee.
- 30) Member, Editorial Board, *Systems Research Forum*, World Scientific Publishing Company, 2009-12.
- 31) Member, Editorial Board and Associate Editor, *Journal of Systems Engineering*, International Council on Systems Engineering, 1998-13.
- 32) Member, Board of Advisors, *Concurrent Engineering*, Auerbach Publishers, 1990-92.
- 33) Member, Editorial Board, *Engineering Costs and Production Economics*, Elsevier, 1984-92.
- 34) Member, Editorial Board, *The Annals of the Society of Logistics Engineers*, 1983-93.
- 35) Member, Editorial Board, *Science, Technology, and the Humanities*, Florida Institute of Technology, 1977-79.

- 36) Invited Participant, *NSF Sponsored Gordon Research Conference on Theoretical Foundations for Product Design and Manufacturing*, Henniker, New Hampshire, June 6-12, 1998.
- 37) Invited Participant, *NSF Sponsored Research Planning Conference on Concurrent Engineering Design*, RGK Foundation, Austin, Texas, October 1990.
- 38) Invited Participant, *Conference on Modern Production Concepts*, Hagen, West Germany, sponsored by the German Research Foundation, August 1990.
- 39) Received NSF International Travel Grant to participate in the *Conference on Manufacturing Research* and the *8th International Conference on Production Research*, Stuttgart, West Germany, August 1985.
- 40) Received NSF Planning Grant to organize and conduct the *Research Planning Conference on Engineering Economics*, Virginia Tech, the Venue was Mountain Lake, Virginia, August 1984.
- 41) Member, Engineering Education Delegation to the People's Republic of China, sponsored by the Committee on Scholarly Communications with the PRC (ACLS, NAS, and SSRC), September 1978 • Debriefing meetings were hosted by government agencies and SAIC.
- 42) Received NSF International Travel Grant to Guatemala, Central America, *Scientists and Engineers in Economic Development*, January 1975.
- 43) Elected Chairman of the Virginia Polytechnic Institute Engineering Faculty Organization, 1969-70 • Served as Vice Chairman, 1968-69.
- 44) Invited Participant, *Ford Foundation and NSF Sponsored Workshop on the Economics of Engineering Systems*, University of California, Los Angeles, June 1968.
- 45) Invited Participant, *NSF Sponsored Conference on Modern Control Theory*, The RAND Corporation, Santa Monica, California, June 1964.
- 46) Ethyl Corporation Doctoral Fellow, Oklahoma State University, Stillwater, Oklahoma, 1960-62 with a hosted Ethyl Corporation internship in the summer of 1961.

### **Publications and Presentations**

The listing of publications and presentations is given in chronological order, beginning with a journal article in 1961. By inspecting the chronology, the contributions of Fabrycky can be used to examine his beginning in general engineering, followed by industrial engineering, and then by interdisciplinary systems engineering over more than a half-century in the form of textbooks, journal articles, conference proceedings, and other. Some of these are being made available electronically through the web site for Academic Applications International, [www.a2i2.com](http://www.a2i2.com).



- 1) Fabrycky, W. J., “SEANET Keynote: Doctoral Study and Research in SE”, *Systems Engineering and Architecting Doctoral Network*, International Council on Systems Engineering, Charlottesville, Virginia, May 2018.
- 2) Blanchard, B. S., W. J. Fabrycky, and T.V. Huynh, *Systems Engineering and Analysis, Sixth Edition*, Pearson Prentice Hall, Under Contract, 2018.
- 3) Fabrycky, W. J., “Engineering Economy at the System Level”, *Proceedings, 123<sup>rd</sup> Annual ASEE Conference and Exposition*, New Orleans, LA, June 27, 2016.
- 4) Fabrycky, W. J., “Systems Analysis: Its Proper Utilization in Systems Engineering Education and Practice”, *Proceedings, 122<sup>rd</sup> Annual ASEE Conference and Exposition*, Seattle, WA, June 15, 2015.
- 5) Fabrycky, W. J., “Foundations for Thinking About the Engineering of Systems” *Gurus in Systems Thinking (GiST)*, Seminar and Workshop, Temasek Defense Systems Institute and Department of Industrial and Systems Engineering, National University of Singapore, Singapore, October 8, 9, and 10, 2013.
- 6) Fabrycky, W. J., “Systems Thinking Research for Systems Engineering”, *Lecture and Workshop for the System Design and Management Program*, Graduate School of Science and Technology, Keio University, Japan, October 5, 2013.
- 7) Fabrycky, W. J., Invited Personal Spotlight, Edited by Sandy Young, *INCOSE Insight*, Vol.16, Issue 2, July 2013.
- 8) Fabrycky, W. J., “Authorship: A Half Century Overview”, Invited Authorship Feature, *INCOSE Insight*, Vol.15, Issue 1, March 2013.
- 9) Fabrycky, W. J., “Thinking About Systems Thinking”, *Proceedings, Third International Conference on Complex System Design and Management (CSDM)*, Paris, France, December 13, 2012. Also served as *Session Chairman* for the topic “Scientific State of the Art”.
- 10) Fabrycky, W. J., “The History of Systems Engineering at Virginia Tech, 1968-2010”, *Invited Presentation*, Gathering of Systems Engineering Alumni, Northern Virginia Graduate Center, November 7, 2012.
- 11) Fabrycky, W. J., “On the Certification of Systems Engineering Degree Programs”, *Academic Council*, International Council on Systems Engineering, Rome, Italy, July 9, 2012.
- 12) Fabrycky, W. J., “A Prospectus for the Certification of Systems Engineering Degree Programs”, *Proceedings, 119<sup>th</sup> Annual ASEE Conference and Exposition*, San Antonio, TX, June 13, 2012.

- 13) Fabrycky, W. J., "Design Dependent Parameters as Controllables in System Design Evaluation", *Technical Seminar*, Chinese Association of Automation (CAA), Chinese Automation Congress 2011, Beijing, China, November 28, 2011. Preceded by a 100<sup>th</sup> birth year tribute by Fabrycky to Prof. Dr. H. S. Tsien on behalf of INCOSE and OAA.
- 14) Blanchard, B. S. and W. J. Fabrycky, *Systems Engineering and Analysis, Fifth (Thirtieth Anniversary) Edition*, Pearson Prentice Hall, Inc., 2011, 801 pages. Includes an Instructor's Guide to Problem Solutions, 161 pages. Also appeared in *International Edition*, Pearson Education, Inc., 2011.
- 15) Fabrycky, W. J., "Systems Engineering: Its Emerging Academic and Professional Attributes", *Proceedings, 117<sup>th</sup> Annual ASEE Conference and Exposition*, Louisville, KY, June 21, 2010.
- 16) Fabrycky, W. J., "INCOSE: Now a Participating Society in ABET", *Presentation to the Board*, International Council on Systems Engineering, Singapore, July 19, 2009.
- 17) Fabrycky, W. J., "Today, yes today, today is, the tomorrow, you worried about yesterday", *Graduation Address*, College of Engineering, Wichita State University, Wichita, Kansas, May 16, 2009.
- 18) Fabrycky, W. J., "System Design Evaluation: A Design Dependent Parameter Paradigm", *Systems Engineering Seminar*, U. S. Naval Postgraduate School, Monterrey, California, February 3, 2009.
- 19) Fabrycky, W. J., "Systems Engineering Intellectual Content: Discovering the Design Dependent Parameter Paradigm", *Systems Engineering Seminar*, U. S. Air Force Academy, Colorado Springs, Colorado, August 28, 2007.
- 20) Fabrycky, W. J., Invited for the Academic Edition of INCOSE Insight, "Understanding and Influencing Systems Engineering in Academia", Vol. 10, Issue 3, July 2007.
- 21) Fabrycky, W. J., "SEANET Keynote: Ten Topics in 30 Minutes", *Systems Engineering and Architecting Doctoral Network*, International Council on Systems Engineering, San Diego State University, San Diego, California, June 2007.
- 22) Fabrycky, W. J., "Systems Engineering and Analysis", *Six Lectures for the System Design Graduate Program*, Graduate School of Science and Technology, Keio University, Japan, October 2006.
- 23) Fabrycky, W. J., "Embedding Integrated Product Development Within the Systems Engineering Process", *Proceedings, Fifth International Seminar and Workshop on Engineering Design in Integrated Product Development*, Zielona Gora / Gronow, Poland, September 2006.
- 24) Fabrycky, W. J., Invited Contribution to the Fellows Edition of INCOSE Insight, "Latent

- Intellectual Content in Systems Engineering: Discovering the Design Dependent Parameter Paradigm”, Vol. 8, Issue 2, March 2006.
- 25) Fabrycky, W. J., Invited Contribution to the Fellows Edition of INCOSE Insight, “INCOSE Academic Certification: Participating in and Going Beyond ABET”, Vol. 8, Issue 2, March 2006.
  - 26) Blanchard, B. S. and W. J. Fabrycky, *Systems Engineering and Analysis, Fourth (Silver Anniversary) Edition*, Pearson Prentice Hall, Inc., 2006, 804 pages. Includes an Instructor’s Guide to Problem Solutions, 144 pages. Also appeared in *International Edition*, Pearson Education, Inc., 2006.
  - 27) Fabrycky, W. J. and B. S. Blanchard, “Life-Cycle Costing,” Section 209 in *The Engineering Handbook, Second Edition*, CRC Press, 2005.
  - 28) Fabrycky, W. J. and E. A. McCrae, “Systems Engineering Degree Programs in the United States”, *Proceedings, 15<sup>th</sup> Annual International INCOSE Symposium*, Rochester, NY, July 12, 2005.
  - 29) Fabrycky, W. J., “Addressing Design Complexity: Integrating Product Life Cycle and Product Portfolio Considerations”, *Proceedings, Fourth International Seminar and Workshop on Engineering Design in Integrated Product Development*, Zielona Gora / Rydzyna, Poland, October 2004.
  - 30) Fabrycky, W. J., “Systems Engineering Education Track”, *Academic Forum Session Chairman, 14<sup>th</sup> Annual International Symposium*, International Council on Systems Engineering, Toulouse, France, June 2004.
  - 31) Fabrycky, W. J., “The ABET Initiative”, *Presented to the Academic Council, 14<sup>th</sup> Annual International Symposium*, International Council on Systems Engineering, Toulouse, France, June 2004.
  - 32) Fabrycky, W. J., “Design Optimization Under the Design Dependent Paradigm”, *Mechanical Engineering Graduate Seminar*, University of Leeds, Leeds, United Kingdom, March 8, 2004.
  - 33) Fabrycky, W. J., “Evaluation in Systems Engineering”, Article E1.28.04.05 in the *UNESCO Encyclopedia of Life Support Systems*, EOLSS Publishers Co. Ltd., 2003.
  - 34) Fabrycky, W. J., “Academic Leadership/Followership: How to Change Engineering Education”, *Proceedings, 13<sup>th</sup> Annual International INCOSE Symposium*, Washington, DC, July 12, 2003.
  - 35) Fabrycky, W. J., “Future Issues in Engineering Accreditation”, *Academic Forum Session Chairman, Keynotes by George Peterson of ABET and Karel Wakker of TUD, 13<sup>th</sup> Annual*

*International Symposium*, International Council on Systems Engineering, Washington, DC, June 30, 2003.

- 36) Fabrycky, W. J., "Systems Engineering Education in the United States", *Proceedings, Conference on System Integration*, Stevens Institute of Technology, Hoboken, New Jersey, March 2003.
- 37) Thuesen, G. J. and W. J. Fabrycky, *Ekonomi Teknik, Indonesian Edition of Engineering Economy, Ninth Edition*, translated by Carley Tanya, Prentice Hall International, 2002, 318 pages.
- 38) Fabrycky, W. J., "Systems Engineering Accreditation Through ABET: Strategic Recommendations and Suggested Next Steps", *Academic Forum*, International Council on Systems Engineering, INCOSE 2002, Las Vegas, Nevada, July 29, 2002.
- 39) Thuesen, G. J. and W. J. Fabrycky, *Engineering Economy, Ninth Edition*, Prentice Hall, Inc., 2001, 637 pages. Includes a Solutions Manual with Courseware, 169 pages.
- 40) Fabrycky, W. J., "System Evaluation: Jointly Considering Life-Cycle Cost and Effectiveness", *Systems Engineering Tutorial*, International Council on Systems Engineering, INCOSE 2001, Melbourne, Australia, July 2, 2001.
- 41) Fabrycky, W. J., B. S. Blanchard, and D. Verma, "Ocena Projektu Systemu Z Jednoczesnym Uwzględnieniem Kosztow Cyklu Zycia I Efeektywnosci", *Projektowanie I Systemy XVI*, Polska Akademia Nauk, Warszawa, Poland (PL ISSN 0239-3174), 2000.
- 42) Fabrycky, W. J., "The Integrated and Interactive Process of Synthesis, Analysis, and Evaluation", *Proceedings, Second International Seminar and Workshop on Engineering Design in Integrated Product Development*, Zielona Gora / Dychow, Poland, October 2000.
- 43) Fabrycky, W. J., "Computing in Synthesis, Analysis, and Evaluation", *Engineering Design in Integrated Product Development (EDIProD 2000)*, Zielona Gora / Dychow, Poland, October 13, 2000.
- 44) Fabrycky, W. J., "Systems Engineering Related Books," *Authors Panel Chairman*, International Council on Systems Engineering, Minneapolis, Minnesota, July 18, 2000.
- 45) Fabrycky, W. J., "Systems Engineering Education and Training," *Open House Moderator*, International Council on Systems Engineering, Washington Metro Chapter, Vienna, Virginia, May 13, 2000.
- 46) Fabrycky, W. J. and B. S. Blanchard, "Life-Cycle Costing," Section 8.13 in *The Technology Management Handbook*, CRC Press, 1999.
- 47) Fabrycky, W. J., "System Design Evaluation", *Encyclopedia of Science and Technology, Ninth Edition*, McGraw Hill, 1999.

- 48) Verma, D., C. Smith, and W. J. Fabrycky, "Fuzzy Set Based Multi-Attribute Conceptual Design Evaluation", *Systems Engineering*, Vol. 2, No. 4, December 1999.
- 49) Verma, D., C. Smith, and W. J. Fabrycky, "Accelerated System Concept Assessment and Selection Through Weighted Wedge Defuzzification", *Proceedings, International Conference on Engineering Design (ICED)*, Munich, Germany, August 1999.
- 50) Fabrycky, W. J., B. S. Blanchard, and D. Verma, "Simultaneously Considering Life-Cycle Cost and Effectiveness for System Design Evaluation", *Proceedings, 9<sup>th</sup> Annual International INCOSE Symposium*, Brighton, UK, June 1999.
- 51) Fabrycky, W. J., "Life-Cycle Cost and System Effectiveness, " *Systems Engineering Tutorial and Workshop*, North Star Chapter, International Council on Systems Engineering, Minneapolis, Minnesota, April 17, 1999.
- 52) Verma, D., R. Chilakapati, and W. J. Fabrycky, "Analyzing a Quality Function Deployment (QFD) Matrix: An Expert Systems Based Approach to Identify Inconsistencies and Opportunities," *Journal of Engineering Design*, Vol. 9, No. 3, December 1998.
- 53) Fabrycky, W. J., G. J. Thuesen, and D. Verma, *Economic Decision Analysis, Third Edition*, Prentice Hall, Inc., 1998, 384 pages.
- 54) Blanchard, B. S. and W. J. Fabrycky, *Systems Engineering and Analysis, Third Edition*, Prentice Hall, Inc., 1998, 738 pages. Also appeared in *International Edition*, Pearson Education, Inc., 1998.
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