

# George Yang

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**TEACHING EXPERIENCE** **Professor, August, 2009** --present  
Associate Professor, August, 2003 to August, 2009  
Department of Engineering Technology  
Missouri Western State University, St. Joseph, MO 64507

**Assistant Professor, January 1998** --2003  
Department of Engineering Technology  
Missouri Western State College, St. Joseph, MO 64507

**Assistant Professor, Jan., 1997**—Dec., 1997  
Department of Technology, Kansas State University, Salina, Kansas

**Teaching Assistant, 1992**--1995  
Department of Chemical Engineering, Kansas State University

**Teaching Assistant, 1986**-1987  
Department of Mechanics, Zhejiang University

**WORK EXPERIENCE** **Professor, 2009** --present  
Chairperson, July. 2009-July, 2014  
Associate Professor, 2003 to 2009  
Assistant Professor, January, 1998 to 2003  
Department of Engineering Technology  
Missouri Western State University, St. Joseph, MO 64507  
--undergraduate teaching: courses including: Computer-Aided Drafting, AutoCAD, Pro-E, CNC, Engineering Materials, Statics, Electronic instrumentation for manufacturing, Quality Control, introduction to engineering technology, PLC, Machine parts and Mechanical Design, Manufacturing methods, Mechanics of Materials, National Electric Code, thermodynamics  
--student advising, curriculum development  
--recruiting, articulation with local technical schools and industries

**Tenure Awarded: 2003**

**Assistant Professor, Jan., 1997**—Dec., 1997  
Department of Technology, Kansas State University, Salina, Kansas  
--undergraduate teaching, courses including: Computer-numerical-Control machining, Thermodynamics, Advanced materials sciences, Material strength and testing.

**Operations Manager/Chemical Engineer, July, 1995**--Oct., 1996  
MCP Urethanes, A Division of MCP Industrial Inc., Pittsburg, Kansas (Headquarter, CA)  
--developed new polyurethane elastomers for optimal tensile strength and hardness with silica filler;  
--tested some two-component and moisture-cured coating formulas;  
--supervised all types of operation including pre-polymer manufacturing, urethane application, purchasing, inventory-control, equipment-maintenance, employee-training, and customer consulting;

--improved mixing processes; designed tools and equipment;  
--created a computer inventory-control program;  
--introduced ISO 9000 series to the management.

**Research Assistant**, 1991--1995

Department of Chemical Engineering, Kansas State University

- Investigated bioremediation of soils contaminated with an immiscible organic phase numerically and experimentally;
- Proposed a new technology for remediation of organic contaminated groundwater: the bio-wall technology;
- Conducted numerical studies on multi-phase mass transfer in porous media and roles of soil heterogeneity in bioremediation;

**Engineer**, July, 1988--Dec., 1990

Pingxiang Coal Mining Machinery, China

- Design and improvement of machinery

**Research Assistant**, 1986--1988

Department of Mechanics, Zhejiang University

- Solved the flow and heat transfer problems in a urea prilling tower;
- Simulated the multi-phase flow and heat transfer in chemical processes;
- Studied natural convection and heat transfer in cavities.

## EDUCATION

**Ph.D.** in Chemical Engineering, Kansas State University, Manhattan, December, 1995

**M.S.** in Mechanical Engineering, Zhejiang University, Hangzhou, 1988

**B.S.** in Mechanical Engineering, Zhejiang University, Hangzhou, 1985

## GRANTS

Co-Director, Midwest Apex Project, \$599,600  
National Science Foundation, DUE-0966120, April 2010-May 2015

MWSU ET Advancement Committee, 2009-2014  
Zach Prescher Memorial Fund, 2009-2014

Energy Audit, \$3,500  
Ring Container, Inc., St. Joseph, MO

## ACCREDITATION

TAC/ABET Assessment preparation and implementation, 2009-2014

## AWARD

Jesse Lee Myers Excellence in Teaching Award, 2009

## EDITOR-IN-CHIEF

American Journal of Engineering and Technology Research  
<http://www.ajetr.org>

## KEYNOTE

2011 International Conference on Opto-Electronics Engineering and Information

## SPEAKER

Science (ICOEIS 2011), "American Engineering and Technology Education," Xi'an Technological University, Xi'an, China.

**ORGANIZING CHAIR** 2012 International Conference on Computer Science and Electronic Engineering (CSEE 2012), May 23-25, 2012, Hangzhou, China  
2012 International Conference on Industrial control and Electronics Engineering, Xi'an, China, August 23-25, 2012

**REVIEWER** The American Society for Engineering Education 118th Annual Conference & Exposition, June 26 - 29, 2011, Vancouver, BC, Canada  
International Conference on Design and Modeling in Science, Education, and Technology: DeMSET 2011.  
The 7<sup>th</sup> International Symposium on Risk Management and Cyber-Informatics: DRANS, 2010., Orlando, FL, 2010  
ASEE Annual Conference paper reviewer, 2003  
Journal of Hazardous Materials, 1995.

**PATENT** Yang, X., Automobile Window Protective Cover, People's Republic of China, Patent No. ZL 95209280.8, 1996

**MEMBER** International Association of Journals and Conferences, 2008  
ASEE, 2000, 2003, 2007  
SME, 1998  
IEEE, 2011-2014

**SERVICE (UNIVERSITY and COMMUNITY)** Organized the industrial advisory board for the ET department, 2010  
Member, St. Joseph Chamber of Commerce leadership committee  
Organized an industrial advisory board for the MWSC MET program, 1998-2003.  
Setup articulations between the MET program at MWSC and other programs at secondary vocational schools, 1998-2003.  
Coordinated for the hosting of the Northwest Missouri Area Industrial Technology day (IT day), 2005-2006.  
Served on St. Joseph Technical Education Development Institute Advisory Board, 1998-2005.  
Served on college Scholarship committee (Chair for 2003) at MWSC 2000-2003.  
Served on the MWSC Faculty Senate Fringe Benefits Committee, 2003-2004.  
Served on the MWSC Faculty Senate Salary Committee, 2003-2004.  
Served on the MWSU Faculty Senate Curriculum Committee. 2004-2007 (Sub-committee chair for one year for 2007).  
Served on the MWSU professional studies dean search committee. 2007.  
Served on the MWSU General Studies committee. 2007 to 2014.  
Served on the MWSU Graduate Program Council, 2010 to 2014  
Served on the MWSU Grievance Committee, 2015 to now  
Organized and in-charge of a Chinese School in Manhattan, Kansas, 2000-2007  
Organized an ACT/SAT study class in Manhattan, Kansas, 2009-2012  
Chair, MWSU Faculty Senate General Studies Committee, 2011-2012  
Presided the re-accreditation of BS Construction Engineering Technology and BS Electronics Engineering Technology by ETAC/ABET, 2013-2014

**PROGRAM STARTED** In 1998, started the Associate of Applied Science (AAS) degree program in Manufacturing Engineering Technology at Missouri Western State College  
In 2005, developed and started the Bachelor of Science (BS) degree program in

Manufacturing Engineering Technology at Missouri Western State University

In 2010, developed and started the Master of Applied Science (MAS) degree program in Engineering Technology Management at Missouri Western State University

**Book Editor:** Proceedings of the 2012 International Conference on Communication, Electronics and Automation Engineering, ISBN: 978-3-642-31697-5, Springer, Springer, Germany, <http://www.springerlink.com/content/q712ww/?MUD=MP>

**Invited Lecture:** Internet of Things: Potentials, Challenges and Case Studies of Applications, Xi'an Technological University, October 17-29, 2015, Xi'an, China

## PUBLICATION AND CONFERENCE LIST

George Yang, "[The Best Energy Source to Save our Planet: Incineration of Plant Materials to Generate Power](#)", the 14th International Green Energy Conference (IGEC-XIV), July 4-8, 2022

George Yang, IMAPnet, [Interstate Monitoring And Positioning network, Enabling L5 Autonomous Driving on Interstate Highways](#), keynote speech at the International Conference on Computer Network, Electronic and Automation 2021, Xi'an, China, 09/24/2021.

G. Yang, Using Graduate Teaching Assistant to Build a Self-Sustaining Graduate Program, presented and published in the proceedings of the 2015 ASEE Conference for Industry and Education Collaboration, Palm Springs, CA, Feb. 2-6, 2015

Xianguang Kong, Yihui Li, George Yang, Research on the OPTIMILL and DNC integration technology based upon message control, Energy Education Science and Technology Part A: Energy Science and Research 2014 Volume (issues) 32(6): 5705-5710

Welcome message, Proceedings of the 2012 International Conference on Industrial control and Electronics Engineering, Xi'an, China, August 23-25, ISBN: 978-0-7695-4792-3, published by IEEE (The Institute of Electrical and Electronics Engineers, Inc.)

Primary Speaker, 2012 ABET Symposium, April 19-20, St. Louis, MO, Comprehensive 3-Dimensional Assessment Approach to Engineering Technology Programs

G. Yang, An Engineering Design of a Social System in a Digital Age, The 2010 International Conference on Networking and Digital Society, Wenzhou, China, May 30-31, 2010. The paper was published in the proceedings of the conference with ISBN: 978-1-4244-5161-6.

G. Yang, A Conceptual Study of Negative Impact of Wind Farms to the Environment, *The Technology Interface Journal*, ISSN #1523-9926, volume 10, no.1, Fall 2009

G Yang, An Educator's Experiment to Promote Technical Graphics Education, presented and published in the Proceedings of the American Society for Engineering Education's 63<sup>rd</sup> Annual Midyear Meeting of the Engineering Design Graphics Division, 2009 Berkeley, CA.

G. Yang, An Engineering Design of the China's Social Structure in a Technology Era, presented and published in the Proceedings of the 2008 IJME-NAIT Joint International Conference on Engineering and Technology, 2008, Nashville, TN. ISBN: 978-1-60643-379-9

Zhu, J, G. Yang, and V. Varma, An Innovative Approach for Expanding Engineering Technology Education, *the Technology Interface*, Spring 2008 issue

Zhu, J, G. Yang, and V. Varma, Delivering Manufacturing Technology Education Through an Innovative Curriculum, presented and published in the proceedings of the 2007 ASEE Conference for Industry and Education Collaboration, Palm Springs, CA, Feb. 7-9, 2007.

Yang, G and Y. Rasis, Teaching PLC in Automation—A case study, presented and published in the proceedings, 2003 Annual ASEE Conference, Nashville, TN, June 23-25, 2003.

Yang, G and M. Najafi, Impact of Manufacturing Technology Education to Local Industries, presented and published in the proceedings, 2000 Annual ASEE Conference, St. Louis, MO, June 18-21, 2000.

M. A. Hassan and G. Yang, Doing More with Less or Nothing—Almost, ASEE Midwest Section 33<sup>rd</sup> Conference, Salina, KS, April 8-10, 1998.

Yang, X., L.E. Erickson, and L.T. Fan, Dispersive-convective characteristics in the bioremediation of contaminated soil with a heterogeneous formation, *Journal of Hazardous Materials*, **38**, 163-185 (1994).

Yang, X., L.E. Erickson, and L.T. Fan, A study of the dissolution rate-limited bioremediation of soils contaminated by residual hydrocarbons, *Journal of Hazardous Materials*, **41**, 299-313, 1995.

Yang, X., L.E. Erickson, and L.T. Fan, A bench-scale study on biodegradation and volatilization of ethylbenzoate in aquifers, *Journal of Hazardous Materials*, **50**, 169-182, 1996.

Yang, X., L.T. Fan, and L.E. Erickson, A conceptual study on the bio-wall technology: feasibility and process design, *Remediation*, pp.55-67, Winter 1995.

Yang, X., L.E. Erickson, and L.T. Fan, A discrete blob model of contaminant transport in groundwater with trapped non-aqueous phase liquids, *Chemical Engineering Communications*, **154**, 33-57, 1996.

Gandhi, P., X. Yang, L.E. Erickson, and L.T. Fan, Modeling the performance of an in-situ aeration well, submitted to *Journal of Environmental Engineering*, (1994).

Chen, Y., and X. Yang, Numerical studies for gas-solid two-phase steady-state mixed convection problems with phase change, *Journal of Hydrodynamics*, Ser.B, **1**, 66-73 (1990).

Chen, Y., W. Pan, and X. Yang, Numerical solution of heat conduction with phase change by enthalpy method with varied time step, *Journal of Southeastern University*, **19**, 40-48(1989).

Chen, Y., and X. Yang, Computation of dilute gas-particle flows based on SIMPLE method, *Journal of Zhejiang University*, **22**, 86-94(1988).

Yang, X., L.T. Fan, and L.E. Erickson, Bio-wall technology: conceptual design and analysis, The AIChE Summer National Meeting, July 30-Aug. 2, 1995, Boston, MA.

Yang, X., L.E. Erickson, and L.T. Fan, Role of biodegradation in the attenuation of ethylbenzoate in aquifers, The 10th Hazardous Waste Research Conference, May 23-24, 1995, Manhattan, KS.

Yang, X., L.T. Fan, and L.E. Erickson, A conceptual study of bio-confinement: bioremediation aided by bio-wall, the Annual AIChE Meeting, Nov. 13-18, 1994, San Francisco, CA.

Gandhi, P., X. Yang, L.E. Erickson, and L.T. Fan, Modeling the performance of an in-situ aeration well, the 24th Annual Biochemical Engineering Symposium, Sept. 10, 1994, Estes Park, CO.

Gandhi, P., L.E. Erickson, X. Yang, and L.T. Fan, Bioremediation aided, pump-and-treat technology for aquifers contaminated by immiscible liquids, the AIChE Summer National Meeting, Aug. 14-17, 1994,

Denver, CO.

Yang, X., L.E. Erickson, and L.T. Fan, A study of the dissolution rate-limited bioremediation of soils contaminated by residual hydrocarbons, Conference on Hazardous Waste Remediation, June 8-10, 1994, Bozeman, MT.

Yang, X., L.E. Erickson, and L.T. Fan, Modeling the bioremediation of soils contaminated with an organic phase, the Annual AIChE Meeting, Nov. 7-12, 1993, St. Louis, MO.

Yang, X., L.E. Erickson, and L.T. Fan, Transport properties of toluene as a non-aqueous phase liquid in groundwater, the 8th Conference of Hazardous Waste Research, May 28-29, 1993, Manhattan, KS. Also in: Proceedings of the Conference of Hazardous Waste Research, L.E. Erickson, Ed., pp.313-330,1993.

Yang, X., L.E. Erickson, and L.T. Fan, Mass transfer in the bioremediation of soils contaminated with trapped non-aqueous phase liquids, the 23th Annual Biochemical Engineering Symposium, Apr. 17, 1993, Norman, OK. Also in: Proceedings of the 23th Annual Biochemical Engineering Symposium, R.G. Harrison, Ed., pp.110-119, 1993.

Yang, X., L.E. Erickson, and L.T. Fan, Dispersive-convective transport in the bioremediation of contaminated clay layers, the 7th Conference of Hazardous Waste Research, June 1-2, Boulder, CO. Also in: Proceedings of the 7th Conference of Hazardous Waste Research, L.E. Erickson, S.C. Grant, and J.P. McDonald, Ed.s, pp.581-600, 1992.

Tuitemwong, P., L.E. Erickson, X. Yang, and L.T. Fan, Effects of depth of a soil column on the biodegradation of palmitate, the 7th Conference of Hazardous Waste Research, June 1-2, Boulder, CO. Also in: Proceedings of the 7th Conference of Hazardous Waste Research, L.E. Erickson, S.C. Grant, and J.P. McDonald, Ed.s, pp.601-615, 1992.

Yang, X., L.E. Erickson, and L.T. Fan, Modeling of dispersive-convective characteristics in bioremediation of contaminated soil, the 22th Annual Biochemical Engineering Symposium, Apr.25, 1992, Ames, IA. Also in: Proceedings of the 22th Annual Biochemical Engineering Symposium, P.J. Reilly, Ed., pp.191-200, 1992.

Pan, W., X. Yang, and Y.Chen, A numerical study on heat conduction with phase change by varying time-step enthalpy method, the Second National Numerical Heat Transfer Conference, Oct. 10-11, 1988, Nanjiang.

Chen, Y., and X. Yang, Studies of numerical simulation for dilute gas-particle two-phase flow, International Symposium on Multiphase Flows, Aug. 3-5, 1987, Hangzhou. Also in: Proceedings of International Symposium on Multiphase Flows, Z. Fan and C.T. Crowe, Ed.s, pp.402-407, 1987.

## **CONFERENCE PARTICIPATION**

- Attended the 56<sup>th</sup> Four-State Regional Technology Conference at Pittsburg, Kansas, November, 1998.
- Attended the Third Annual Developments in Pipeline Design and Construction Conference at St. Joseph, Missouri, October, 1998.
- Participated in the 1999 Underground Construction Technology Conference in Houston, Texas, January 1999.
- Attended the Trenchless Technology Symposium at Kansas City, Missouri, March 1999.

- Attended the Missouri ACTE 4-days Summer training in Springfield, MO, June 2002 and June 2003.
- Attended the Best Assessment Symposium at Terre Haute, IN, April 24 to 26, 2003
- Session Chair, The 2010 International Conference on Networking and Digital Society, Wenzhou, China, May 30-31, 2010.
- 2011 ABET Symposium, Indianapolis, IN, April 14-16, 2011

## **CERTIFICATE**

Vocational Teacher's Certificate from the State of Missouri, 2002-2003

### **Graduate Student Advised** (MAS, Engineering Technology Management, Final Graduate Report Advisor)

Devin Hart, 2012  
Corey Halderman, 2012  
William Burnich, 2013  
Brain Kidwell, 2013  
Charlie Ramsbottom, 2013  
Danny Young, 2013  
Glenn Carpenter, 2014  
Mark Diggs, 2014  
Joshua Weaver, 2014  
Abdulrahman Basfar, 2015  
Joseph Mace, 2016

### **Graduate Course Taught:**

EGT 530 Current Advancement in Engineering Technology (every Fall semester)  
EGT 690 Engineering Technology Research (every Spring and Fall semesters)