

BAHMAN GHORASHI, Ph.D.



Best Selling Author:

“How to Become an Exceptionally Successful Young Person” was elevated in 2020 (As of November 22, 2020) to number 13 on the Best Selling list of Amazon in its category.

<https://www.amazon.com/gp/bestsellers/books/271595011>

Recent Videos - Unleash your Creativity

<https://www.youtube.com/watch?v=9GmPUamr7zk&feature=youtu.be>

Major Speeches:

2011 State of the College Address PDF File and Video:

Video: <http://www.youtube.com/watch?v=KBqkD9K1kno>

2010 State of the College Address PDF File and Video:

Video: <http://www.youtube.com/watch?v=mr8M9vKgUlw>

2009 State of the College Address PDF File and Video:

Video: <http://www.youtube.com/watch?v=NekFgMoBZxs>

2008 State of the College Address PDF File and Video:

Video: <http://www.youtube.com/watch?v=vyv3hFkmG5I>

2007 State of the College Address PDF File:

PDF File: <http://www.csuohio.edu/engineering/downloads/2007stateofcollegeaddress.pdf>

PROFILE

My focus and proudest achievements, throughout my professional life as an educator, has been centered on student success. Increasing undergraduate student retention and graduation rates, preparing students in K-12 for college education, assisting graduate students with financial support and the means to achieve their goals and helping faculty with their professional development and providing them with the needed infrastructure so that they better assist our students have been the most satisfying accomplishments of my career.

- Over twenty-five years of higher education administrative experience in both traditional and collective bargaining environments, rural and urban settings, individual board and system-board governance, traditional and RCM budget models, STEM and comprehensive institutions, and a record of successful progression in rank from faculty to assistant dean, chairman, associate dean, college dean, executive director and provost of a comprehensive, nationally ranked doctoral/research institution
- Successful record of substantially increasing student enrollment, retention and graduation rates
- Successful fundraiser with a solid record of accomplishments
- Successful record of working with legislators, government officials, business and civic leaders
- Successful record of building infrastructure, hiring the best individuals, assembling the right teams, aligning resources, establishing leading-edge programs and turning failing endeavors into most effective and thriving programs
- Experience with budgetary and finance matters, having successfully and efficiently managed budgets of over ninety million dollars
- Successful record of research accomplishments at the national and international levels with millions of dollars in grant funding and over eighty publications
- Full understanding of the needs of a complex and comprehensive university with appreciation of the values of arts and humanities as well as STEM fields and ample evidence of success in both categories
- Successful record as an educator together with notable accomplishments in the areas of diversity and inclusion, community engagement and service to the community
- Successful record in establishing an infrastructure conducive to receiving flawless institutional reaffirmation of accreditation (SACSCOC)

EDUCATION

Ph.D.	Chemical Engineering _____	The Ohio State University
M.S.	Chemical Engineering _____	The Ohio State University
B.S.	Chemical Engineering _____	Wayne State University
MLE	Management & Leadership in Education Certificate	Harvard University, Graduate School of Education

HIGHEST ACADEMIC RANKS

- Full Professor of Chemical Engineering with Tenure, Tennessee Tech University, 2013-Present
- Full Professor of Chemical and Biomedical Engineering with Tenure, Cleveland State University, 1991-2013

ADMINISTRATIVE EXPERIENCE

- Provost and Vice President for Academic Affairs, Tennessee Tech University, 2013–2017 (Recognized by TTU President and Board of Trustees for accomplishments and achievements as Provost, June 2017 Board Meeting)
- Executive Director, Fenn Research & Development Institute and Fenn Academy, CSU, 2009–2013
(*Fenn Academy consortium included Cleveland State, 8 corporations, 42 school districts, and several non-profits*)
- Dean, College of Engineering, CSU, 2007–2011
- Associate Dean for Academic Affairs, College of Engineering, CSU, 2005–2006
- Director, Fenn Academy, 2005–2009
- Interim Chairman, Department of Chemical and Biomedical Engineering, CSU, 2005
- Director, Doctor of Engineering Program, CSU, 2004–2007
- Chairman, Center for Diagnostics, Imaging and Visualization, Ohio Aerospace Institute, 1993- 1998.
- Assistant Dean of Research, College of Engineering, CSU, 1991-1993
- University Representative, Ohio Aerospace Institute-CSU, coordinating the interactions with a consortium of nine universities, industry, and research laboratories, 1989-1993

Other Administrative Assignments

- Acting Dean, Fenn College of Engineering, CSU, 2005 (in the absence of the Dean)
- Acting Chairman, Mechanical Engineering Department, CSU (during a period of absence of the department chairman), 2005. Also, during the absence of the interim chair in the summer of 2006

- Acting Chairman, Chemical Engineering, (during the periods of Absence of the Dept. Chairman), late 1980's
- Graduate Program Director, Chemical Engineering Department, CSU, 1993-1996
- Chairman, Fourth International Conference on Laser Anemometry, Sponsored by the American Society of Mechanical Engineers, NASA Lewis Research Center, Ohio Aerospace Institute, CSU, Case Western Reserve University and the European Association for Laser Anemometry
- U.S. Organizing Committee, International Conference on Laser Anemometry, 1990-1991

ADMINISTRATIVE SUPERVISION EXPERIENCE

As Provost and VP for Academic Affairs/Chief Academic Officer, the following outlined my scope of responsibilities:

Budget Supervision

- Approximately \$92,000,000 (adjusted FY 15 Academic Affairs budget)

Number of Academic Affairs Employees Under Provost's Supervision

- Approximately 1,230 employees as of August 2016

Supervision of Administrative Units

- | | |
|--|--|
| ▪ College of Agriculture & Human Ecology, Dean | ▪ College of Interdisciplinary Studies, Dean |
| ▪ College of Arts and Sciences, Dean | ▪ College of Graduate Studies, Dean |
| ▪ College of Business, Dean | ▪ Whitson-Hester School of Nursing, Dean |
| ▪ College of Education, Dean | ▪ Volpe Library, Dean |
| ▪ College of Engineering, Dean | ▪ Newly Formed College of Fine Arts, Dean |















Associate Provosts, Associate Vice Presidents, Assistant Vice Presidents and Directors

- | | |
|---|--|
| ▪ Institutional Research | ▪ Faculty Development Programs |
| ▪ Women's Center | ▪ Advisement Office and Student Success Centers |
| ▪ Appalachian Center for Craft | ▪ Financial Aid |
| ▪ Career Services | ▪ Office of the Registrar |
| ▪ Honors Program | ▪ Scholarships |
| ▪ International Education | ▪ Transfer Coordination |
| ▪ Extended programs | ▪ Veteran's Affairs |
| ▪ Rural Development Institute | ▪ Admissions & Recruitment |
| ▪ Accreditation | ▪ Retention Services |
| ▪ Assessment and Performance Funding | ▪ Tennessee Tech Online Programs |
| ▪ University 1020 | ▪ Regent's Online Degree Programs (TN e-campus, TTU online programs) |
| ▪ Center for Teaching and Learning Excellence | ▪ Tennessee Tech Extended Sites |
| ▪ Quality Enhancement Plan Program | ▪ Tennessee Tech Continuing Education programs |
| ▪ Undergraduate Research | |
| ▪ Army ROTC | |

Accomplishments as Provost

Outcome of Major Initiatives at Tennessee Tech

Please see the video – “Unleash your Creativity”:
<https://www.youtube.com/watch?v=9GmPUamr7zk&feature=youtu.be>

Overall & Freshman Enrollment		About 25% increase in freshman application & enrollment in Fall 2017 after two years of TN Promise (free Community College in TN)
Freshman Retention Rate		10% increase in freshman retention over a two-year period
Graduation Rate		18% increase in graduation rate over the period: 2013-2018
Tenure-Track Faculty Hires		Over 100 tenure-track faculty, including department chairs, were hired since July 2013. More faculty members were hired or authorized to be hired in AY 13/14 & 14/15 than in many years in recent past
New Lecturers		Over 45 new lecturers were hired
Student-Faculty Ratio	Improved	19% decrease (from 22.2 students per faculty to about 18)
Average Faculty Salaries		Increased every consecutive year, for four years (2013-2017), with market adjustments for underpaid individuals
Additional Temporary Faculty		\$1 Million (one-time) additional funds for hiring of temp faculty
New Graduate Students		14% increase – As a result of a one-time funding for GA’s which can make the next Doctoral /Research classification of TTU (based on AY 2016-2017) possible
New Student Success Initiatives		Over 25 New Initiatives to improve student success which resulted in significant increase in student retention rate
Highest “Performance-Funding” Score		97.5 – 2013-14 for FY 2015 - Highest among all Tennessee Board of Regents and University of Tennessee System institutions. The score reflects the results of such activities as: academic audits, accreditation activities, major field tests, senior exit exams, NSSE surveys and Quality Enhancement Program projects
More Highly Qualified Students*		24.4 Ave. ACT Score - First-time freshmen with a large percentage having an ACT Composite score of 28 or greater.
No. of Women in STEM Disciplines		952
New Academic & Degree Programs		Over 40 New Programs Ph.D., Masters, PSM, concentrations
New Off-Campus Programs		2 Programs

Major New Entities Established at Tennessee Tech

- Established a new Division of Digital and distance education
- Established a new College of Fine Arts
- Established a new Honors College
- Formed the College of Graduate Studies [Formerly a Graduate Studies Program]
- Established a new Center for Teaching and Learning Excellence
- Rural Development Institute
- Campus Compass (One-Stop-Shop for Students)
- Learning Assistance & Central Tutoring Center
- Established a Center for Creative Inquiry
- Established a Math Emporium
- Writing Studio (Writing Excellence Studios at Tech)
- Established an Innovation & Discovery Institute [Bus./Eng. Collaboration] and a “Maker Space”

SACSCOC Reaffirmation of the University’s Accreditation

- A flawless SACSCOC reaffirmation of accreditation (2016) with no recommendations

National Ranking

Advanced from a “Master’s Colleges and Universities” category to a nationally ranked “Doctoral/Research” institution and took crucial steps to sustain the new classification in the future

- In 2016, Carnegie reclassified Tennessee Tech University from the Basic Classification category of “Master’s Colleges and Universities” to the category of “Doctoral/Research Universities”. In anticipation of the change and to ensure that the University maintains its doctoral/research classification in the future, we created a pipeline of graduate students to our doctoral programs through special funds for GAs. This will allow the continuation of the Doctoral/Research classification, based on the AY 2016/2017 data.
- Also, in 2016, for the first time, US News recognized Tennessee Tech as a nationally ranked institution. Only one other public institution in Tennessee is nationally ranked.

Other University-Wide Projects

- Chaired the Focus Act Transition Taskforce to separate the University's governance structure from Tennessee Board of Regents to an independent University governing board.

Major New Academic & Non- Academic Programs/Events/Projects

- Over 40 new (doctoral, masters and undergraduate) academic programs
- New Admission Standards – more selective freshman admission standards
- T.E.A.M. (Faculty Development) Program - in partnership with other major universities
- Faculty Leadership Program
- Tech Togetherness Program [Campus activities to bring faculty/staff/students together]
- Formation of Diversity and Inclusion Committees within each College
- Community Day [*changed to Preview Day*]- [A campus-wide recruiting event (App. 1,600 visitors)]
- Hiring of seven new deans, several directors and senior administrators
- A new Quality Enhancement Plan program to enhance undergraduate student experience
- Successful accreditation and academic audit of many graduate and undergraduate programs
- New academic affairs policies approved by faculty [Over 100 academic policies were formulated or updated and were presented to faculty for their review and approval]
- TTU Journal of Undergraduate Research
- Stimulated the Construction of a New Academic Budget Model
- Continuity of Operations Plans for each academic unit [Business Continuity Plans in case of a disaster]
- Formation of an On-Line Education Strategy & Plans
- Individual College Strategic Plans

Proposed and Approved Major New Physical Facilities

- International House [Presently being designed to be constructed for use by international students]
- Tech Wall [An interactive wall designed for career awareness and recruitment purposes – completed in 2015]
- Jere Whitson Building for Enrollment Management Division [Completed in 2017]

Accomplishments as Dean of Engineering Outcomes of Major Initiatives at Cleveland State

Undergraduate Enrollment	↑	119% increase in new undergrad enrollment since 2005
New Freshman Enrollment	↑	146% increase in new freshman enrollment since 2005
New Transfer Enrollment	↑	92% increase over a five-year period
New Graduate Enrollment	↑	51% increase since 2005
Retention	↑	11% increase in retention - New Fulltime Students
Fund-raising (Gifts, Donations & Endowments)	↑	116% increase in Endowment Growth over a 5-yr. period
Scholarships for Engineering Students	↑	407% increase from 2005 to 2009
Re-Accreditation	+	No Weaknesses listed, only points of strength
Grant Funding	↑	Increased (from 23% to over 46%)
Private Donor Endowment	↑	Over \$1,000,000
Cost Savings	↑	\$700,000 [without affecting the academic programs]
Facility Improvement	↑	Over \$1,500,000
Revenue Increase to Academic Programs	↑	Via a Technology Fee
New Academic & Degree Programs	↑	7 New Programs [plus 1 certificate program]
Merged Programs (with full faculty support)		2
National Media Coverage of the College	+	CBS Evening News, CNBC, Reuters, BW
College Awards and Commendations	+	Ohio Secretary of State, Auditor of State, Nortech
New Operational Programs & Initiatives	↑	40
Co-op Program Restructuring/Accreditation	+	Completely restructured and accredited
Faculty Morale	↑	Independent Accreditation Report

New Partnerships	↑	Many universities, 36 high schools and 10 corp's
Grad Student Support (Externally Funded Research)	↑	34% (FY 07 vs. FY 06)
Comprehensive Internal Review	+	Satisfactory - No unresolved issues
Honors Program Participation	↑	Nearly Doubled (the # of engineering students 07 vs. 08)
Off-Campus Locations	↑	New Off-Campus Offices (14 locations)
GPA of Newly Admitted Freshmen	↑	3.55 out of 4.00
Average ACT of Applicants	↑	From 22.5 to 23.5
New Research and Design Centers	↑	2
Strategic Plan	+	Five-year plan completed & being implemented
New Endowed Chairs	↑	1

Summary of Initiatives and Accomplishments

Fundraising

- 116% increase in endowment growth- Giving & scholarships over a five-year period [2010 CSU Book of Trends, pa. 178]

As Engineering Dean, worked with CSU Development Foundation to hire a Major Gifts Officer and constructed a fundraising plan. As a result, the College received numerous gifts from alumni and supporters, among them, Endowed Distinguished Professorship, Research Endowment and Co-Op Endowment. Also worked with the alumni and potential donors to increase the pledges to the College.

SCHOLARSHIP FUNDS (From 2008 and 2009 CSU Book of Trends, Table 8.7) - CSU Foundation: Endowment Growth by College - Engineering

Scholarships:

\$ 1,214,346	2006
\$ 1,907,459	2007
\$ 2,277,871	2008
\$ 2,567,628	2009

MAJOR ENDOWMENTS & GIFTS

\$10,000,000	Monte Ahuja Endowment, June 2011. Scholarships to the College of Business and Engineering, CSU
\$ 1,000,000	Endowed Chair in Clean Energy (wind energy), CSU
\$ 500,000	Betty L. Gordon Endowed Distinguished Professorship
\$ 500,000	Gordon Alternative Energy Research Endowment
\$ 100,000	Anthony Colnar gift to the College, December 2007

Shares of stock	Hess Corp., William Bland Co-Op Endowment, March 19, 2007 (to provide scholarships for students)
\$ 100,000	Ronald R. Ledin Fenn Academy Engineering Education Endowment Fund
\$ 92,356	Edward Sobey Endowment, December 2010 (to provide discretionary support for the Engineering Dean)
\$ 50,000	Terrence V. and Mary K. Zuk Endowment, June 30, 2010 (to provide scholarships for students)
\$ 50,000	James Heckelman Endowment, Dec. 2010 (scholarship awards)
\$ 30,000	Martin & Black Family Scholarship Endowment, June 17, 2010 (to provide scholarship awards)
\$ 25,000	Connectors Unlimited, Inc. Engineering Scholarship Endowment, Sept. 29, 2010
\$ 25,000	Byron and Dreama Smith Endowment, December 2010, (scholarship for engineering and nursing students)
\$ 25,000	Richard Bowen and Associates Engineering Scholarship, December 2010

Triple and quadruple increases in cash gifts to the College of Engineering, CSU, during the Engineering Dean period which includes gifts, bequests, and pledge payments:

\$ 844,107	2010/2011
\$ 988,574	2009/2010
\$ 941,818	2008/2009
\$ 1,045,633	2007/2008
\$ 333,699	2007 to June 30, 2007


IN-KIND GIFTS

- Daedal Square Rail Table with Precision Ball Screw, Donor: Parker Hannifin Corporation, December 2008
- Servo Type 140 Y-Axis Power Feed, Ser. # 140-467451, Donor: High Quality Tools Co., Bruce Walker, June 2009
- 15 DK-DE1-2C20N UNIV Education Kit, Donor: Altera Corporation, October 15, 2010
- 10 DK-DE2-2C35N UNIV Education Kit, Donor: Altera Corporation, October 15, 2010
- Visualization Software, Donor: InduSoft Corporation, April 7, 2011 [\$65,700]
- Boundary Systems, Donor: Pro/Engineer Software, Spring 2011 [\$13,100]

OTHER EXTERNAL FUNDS

\$ 1,500,000 2008/2009 [Estimated Roof Repair & Physical Fac. Improvement]

Overall Fund Raising Performance:  **407% increase in five years**

External Grant Funding Performance:  **100% increase**

FUNDRAISING STRATEGIC PLAN, TTU

Worked with all deans and the Vice President for University Advancement to collectively construct a meaningful strategy for the division of Academic Affairs.

The plan includes a.) **Faculty Development:** Center for Teaching and Learning Excellence, Visiting Scholars, Faculty Exchange Program, Laboratory Development, Deans/Chairs Leadership Programs, Exposure Opportunities for Nationally Recognized Expert Faculty (Distinguished Lecture Series, Forums, Media), b.) **Student Support:** Scholarships, Support for Honors Students/Scholars, Study Abroad Program, International Programs, Campus Compass Program, Service Learning/Internship Programs, c.) **Facility Support:** Free Clinics/ Mobile Free Clinics, Music department Steinway School, Media Center, School of Agriculture Farms, Discovery Center at the Library, Honors College Building, Campus Compass facility, TTU Satellite Campuses, d.) **Education and Research Advancement:** Research Centers of Excellence, Endowed Chairs, Distance Learning (World Campus), Interdisciplinary Projects, Entrepreneurship program, Research lab Development, and Think Tanks.

Student Success, Retention and Graduation Rates

RETENTION RATE

- Nearly 10% increase in one-year Tennessee Tech University retention rate for first-time, full-time freshmen of Fall 2015 (from 68.9 % to 79%)
- 11% increase in one-year Cleveland State University engineering retention rate for first-time, full-time freshmen increased by 11%
- A new TTU position of Director of Retention Services was established to develop and oversee strategic efforts across the institution to improve student success
- Established the Provost's Micro-Grant Program at TTU for student success initiatives - focused on inspiring and soliciting innovative strategies from the campus community to improve student retention, academic performance, and time-to-degree

SCHOLARSHIPS AND FINANCIAL ASSISTANCE

- 407% increase in scholarships for engineering students at CSU from 2005 to 2009
- Approximately \$5,000,000 in new scholarship funds at TTU over five years
- Increase in graduate student support at CSU
- Implementation of a plan at TTU to streamline tuition and fee deferment for students receiving VA educational benefits
- 34% increase in graduate student support from externally funded research (Source: 2008 CSU Book of Trends, pp 89)

STUDENT SERVICES

- Established the Campus Compass program at TTU to immediately respond to students' needs
- Established the Honors College to better serve students who needed additional academic challenges
- Almost doubled the number of engineering students in the Honors program, CSU
- An Innovation and Discovery Learning Institute was completed in Volpe Library [a collaborative task that involves several units], summer of 2015
- Construction of an interactive electronic wall at TTU to guide students regarding their academic options)
- Restructuring and accreditation of the Fenn Co-Op program at CSU
- Student Success collaborative platform at TTU which includes a web-based student tracking system for advisors and a dashboard for academic administrators
- Addressed the enrollment in high-demand courses & course scheduling (TTU)
- Summer program at TTU with new incentives for colleges to expand their offerings
- Enacted a standard syllabi format and a web-based inventory of all syllabi to better serve TTU students
- Established a "Course Waitlist" at TTU for students to add their names to a waiting list for closed courses
- Inclusion of Minors on Transcripts at TTU to assist students with the presentation of their credentials
- Quick ID was implemented at TTU — eliminating the need for students to show photo IDs when requesting services
- A newly developed Hybrid Advisement Model was fully implemented at TTU with a full staff of professional advisors working within the colleges to ensure that freshman and sophomore students have access to full-time, professional advisors
- An automated phone service was acquired for the Registrar Office to transfer calls to the appropriate team members for fast response and assistance to TTU student

DIVERSITY AND INCLUSION

- Double and triple digit increases in the number of under-represented students over a five-year period [*CSU 2010 Book of Trends, pa. 59*]: 26% increase in African American students, 112% Hispanic, 15% Asian, 33% Native American

HIGH IMPACT PROGRAMS/ PRACTICES

- Undergraduate Research Program funding was increased at TTU
- Implementation of the recommendations of the National Survey of Student Engagement (NSSE)
- Established a campus-wide student Entrepreneurship Society
- Establishment of a taskforce for integrating career awareness into student's activities

TUTORING AND ADVISING

- Establishment of Learning Assistance Center at TTU – Centralized tutoring
- A new institution-wide hybrid advisement system established at TTU to provide centralized oversight
- Implementation of a new degree audit technology at TTU to assist advisors and students in effective and efficient course advisement and a College Scheduler software implementation
- Monitoring of freshman class attendance and targeted student success strategies for at-risk freshmen
- Hired 15 new professional advisors to better serve TTU students at various Student Success Centers
- Created the Academic Advising Council at TTU where Student Success Center directors and Athletics Advising can discuss campus-level advising-related initiatives
- Created the Advising Exchange—a monthly professional development opportunity for all those interested in Academic Advising on campus, including both professional and faculty advisors
- Implemented a professional development program for the advising community. Seventeen unique sessions have been offered at TTU with an average attendance of 14 advisors

VETERANS AND NON-TRADITIONAL STUDENTS

- A new position of Director of Military and Veterans Affairs at TTU to assist veterans

ACADEMIC ASSISTANCE

- Math Emporium – establishment of a TTU Mathematics Emporium
- Instituting the inclusion of academic minors into every DegreeWorks program of study at TTU. Students and Advisors can now track their requirements for both their majors and minors in Degree Audit system

Enrollment and Recruitment

Cleveland State - Changed a declining undergraduate engineering enrollment to one of the fastest growing programs nationwide

- 119% increase in new undergraduate enrollment over a five-year period [*CSU 2010 Book of Trends, pa. 12*]
- 146% increase in new freshman enrollment over a five-year period [*CSU 2010 Book of Trends, pa. 12*]
- 92% increase in new transfer enrollment over a five-year period [*CSU 2010 Book of Trends, pa. 12*]
- 51% increase in new graduate enrollment over a five-year period [*CSU 2010 Book of Trends, pa. 12*]
- Formation of a university/business/K-12 consortium for a seamless transition to **college** at CSU

Tennessee Tech - A new recruitment strategy resulted in a double-digit jump in the number of applications

- 11% increase in retention of new full-time students – from 69% to 80% in 2009
- 10% increase in freshman retention at TTU over a two-year period
- About 25% increase in freshman applications at TTU in 2016
- New admission standards - more selective freshman admission standards
- Establishment of the Office of Assistant Vice President for Recruitment at TTU and the hiring of the AVP to start in January 2016 to develop a comprehensive strategy and align all the recruitment activities (double digit surge in the number of applications have resulted)

STRATEGIC INITIATIVES

- Expansion of the recruitment geographical area at TTU (a radius of 250 miles)
- Hiring of new recruiters at TTU for community colleges and international students
- On-line education strategy for the entire Tennessee Tech University through establishing a division of digital and Distance Education
- One million dollars additional funding at TTU for graduate student support
- Partnership with Cookeville High School and the Putnam County VITAL Collegiate High School (VCHS) for Dual Enrollment (U.S. History)
- Developed more intuitive Dual Admissions Agreements with community colleges, e.g. Nashville State Community College (September 2014) and Cleveland State Community College (January 2015)

MARKETING AND PUBLIC RELATIONS

- Designed and implemented a Community Day event at TTU inviting community college students as well as high school and non-traditional students to campus for advising, registration, visit with departments' faculty and staff, lunch and numerous campus activities. The inaugural event was on November 8, 2014 About 1,800 visitors were welcomed to campus during the first year. The program has since expanded (Preview Day) with more participation
- Enrollment market analysis and data acquisition
- Launched a social media campaign, #TechYeah – prospective students
- Hosted 4,643 visitors (1,684 prospective students) through the VIP Campus Visit Program. This program provides general TTU information, application process information, campus tours, departmental meetings, lunch on campus, and residential life tours
- Career Day events with over 100 registered employers and over 2,000 participants
- Healthcare Fair and Engineering Fair events with record crowds attending
- Establishment of a taskforce for recruitment of non-traditional students

NATIONAL RANKING

- Established a taskforce and worked to improve TTU's national and international rankings. TTU became nationally ranked in 2017

RECRUITMENT STRATEGY THAT RESULTED IN A SURGE IN THE NUMBER OF APPLICATIONS

Hiring of a new Associate Vice President for Admissions, implementing a new out of state recruitment strategy (R250), getting College deans and department chairs directly involved and acquiring the services of an outside firm, among others, has resulted in a jump in the number of applications. As of Oct. 28, 2016, compared to a year ago, the total freshman applications increase by 21.4% and the total transfer applications increased by 15.8%. This trend continued through the entire 2016-2017 academic year.

Government, Business and Community Engagement

Worked with congressional representatives, government officials, state and local officials, legislators, as well as business and civic leaders in two states to bring many projects and initiatives to fruition, among them:

- Ohio Aerospace Institute
- Center for Diagnostics, Imaging and Visualization (CDIV)
- Fenn Academy
- Fenn Research and Development Institute
- Establishment of 15 off-campus branch offices of Fenn Academy
- Lawrenceburg, Tennessee campus of TTU (under development)
- Honored with many accolades from congressional representatives, Governor's Office, commissioners, Secretary of State of Ohio and state representatives including a Certificate of Commendation from the Ohio House of Representatives, the 112th General Assembly of Ohio

Diversity and Inclusion

AWARENESS, WORKSHOPS, POLICIES AND TRAINING PROGRAMS

- Ohio Aerospace Institute
- Diversity and Inclusion Training programs were conducted at TTU
- Diversity and Inclusion Committees established within each of the Tennessee Tech colleges
- Formation of an Ad Hoc Committee at TTU to define, formulate policies and implement training and awareness for prevention of Violence Against Women, Sexual Assault, and Domestic Violence
- Campus Awareness Sessions regarding the Americans with Disabilities Act were conducted at TTU
- Nearly every first-time freshman enrolled at Tennessee Tech University for the Fall 2015 semester participated in rich conversations about the benefits of diversity and having an inclusive mindset.
- As Fenn College Dean, initiated programs and efforts to establish inclusiveness, awareness and respect and a recognition that our learning environment is supported and enhanced by the diversity of faculty, staff and student body
- Established Fenn College Diversity Training and Education seminars

ACTION ITEMS

- Through Fenn Academy, partnered with several Cleveland schools to assist in student preparation for careers in engineering
- Through Fenn Academy, partnered with two schools to assist in preparation of women for careers in engineering
- In spring of 2011, established a diversity committee within Fenn college to advance access and diversity and support personal development of diverse students, faculty and staff
- At TTU, the university launched a Diversity Scholarship Initiative to provide scholarships for students from underrepresented groups
- Expanded the TTU Women's Center's responsibilities and its budget
- At CSU, assigned an associate dean to represent the College and the University in a joint NSF proposal regarding academic careers in engineering and science in partnership with Case Western Reserve University, Kent State, University of Akron and University of Toledo that will "encourage equitable recognition and promotion of intellectual talents of *all* of its faculty members." – The proposal was entitled: Institutions Developing Excellence in Academic Leadership (IDEAL)

- Tennessee Tech hosted a diversity summit later in 2016 entitled “Don’t Wait, Cultivate: Real Strategies to Build and Support a Diverse Workforce in Higher Education.” This collaborative experience focused on university strategies for recruiting and retaining minority faculty and staff

INCLUSION OF UNDERREPRESENTED GROUPS

- As Director of Fenn Academy, identified several high schools to assist them with program development and for recruitment. These schools had high percentages of minority students, including those located within the Cleveland Municipal School District. Specific program activities were designed to attract women and minority students. The first partnership agreement was signed in May 2006 with Early College Program, Cleveland Municipal School District housed in John Hay High School.
- In the 2008 CSU Book of Trends, Pre-Engineering was listed as “Top 15 [CSU] Degree Seeking Programs with Highest Female Students Enrollment by Level Fall 2007” in terms of Minority as a percentage of Total Major Enrollment” (19%). [Source: 2008 CSU Book of Trends, Table 6.8, Page 121]

Faculty & Staff Development

FUNDING AND PROFESSIONAL DEVELOPMENT SUPPORT

- More than doubled the funds for AY 15/16 faculty development, TTU
- Increased the number of Non-Instructional Faculty Leaves (sabbatical leaves), TTU
- For the first time, allocated funds specifically for staff development, TTU
- A New Endowed Chair in Clean Energy, Fenn College , CSU
- Establishment of a continuous improvement program (Kaizen) to recognize and reward the staff, CSU and TTU
- Establishment of a research Journal, TTU
- Established the Faculty Leadership Program:
<https://www.tntech.edu/provost/faculty-development-programs/faculty-leadership>
- Established the T.E.A.M. Leadership Program:
<https://www.tntech.edu/provost/faculty-development-programs/team-leadership>
- Tech Togetherness Program was successfully established:
<https://www.tntech.edu/provost/faculty-development-programs/tech-togetherness>

BUILDING OF INFRASTRUCTURE

- Implemented the collection of a growing digital library, available on the Library website, consisting of collections unique to Tennessee Tech
- Established the Center for Teaching and Learning Excellence at TTU to assist our faculty with classroom improvements
- One million dollar, one-time funds, to hire adjunct faculty in order to give our permanent faculty additional time and also to increase the number of high-demand sessions, TTU

HIRING OF TENURE-TRACK FACULTY AND LECTURERS

- Ninety-one tenure-track faculty members were hired at TTU between July 2013 and August 2016.
- Also, during the 2013 – 2016 period, 37 lecturers were hired, TTU
- Hired excellent new faculty in key strategic areas, CSU

RESULTS

- Improvement of faculty morale as noted by external reviewers through independent interviews, Fenn College, CSU

Online Education

NEW ONLINE EDUCATION STRATEGY – A SIX-STAGE PROCESS

Constructed a new online education strategy, based on a six-step environmental scan, that addresses the organizational structure, staffing talents, funding structure, policies and approval/review process, course/program demands, faculty credential, software needs, market analysis and growth targets:

1. Evaluated TTU's online infrastructure and the existing capabilities
2. Worked with the Council of Deans to form a vision
3. Acquired the assistance of consultants to develop a roadmap for the future of TTU's online education
4. Informed the faculty, staff and administrators about the findings of an online education environmental scan
5. Started the process of consensus building
6. Established the Division of Online and Distance Education and hired an Associate Vice President for Online and Distance Education

Budgetary and Fiscal Operations

Proposed, for the first time, a budget model for academic colleges. This model was discussed with the faculty and based on their input, it was substantially revised by a committee of deans and faculty with the help of consulting experts to the specific needs of TTU to better align it with TTU's strategic goals. The model provides incentives for improved performance in various areas of student success and scholarly and creative activities.

FACULTY PARTICIPATION

In order to ensure faculty participation, we invited the faculty leadership to work together with the staff representatives, deans and external experts to consider a number of models and identify what they deemed appropriate for TTU. As a result, a unique model was ultimately constructed which has some elements from the well-known RCM model.

Other budgetary decisions include:

- Complete transparency and dissemination of existing department budget information to all academic units
- Faculty salary adjustments were made each year based on the funding that was available

Additional funds were also allocated to support the following units/programs: diversity programs, legislative interns, teaching quality initiatives, individual development and evaluations assessment, new faculty moving expenses, SACSCOC reaffirmation of accreditation preparation, faculty job postings, math lab renovation, undergraduate research, high school student scholarships, craft center and art department, faculty recruitment, faculty development, Military Science, strategic initiatives for new deans, international recruitment, lab equipment, marching band, Women's Center (permanent funds were also provided), new programs and initiatives, remodeling of academic buildings, individual college strategic plans.

In order to acquire Carnegie Doctoral/Research classification and to serve our undergraduate students better with their course requirements, the following allocations were made:

- \$1,000,000 one-time fund distributed for Graduate Assistantships
- \$1,000,000 one-time fund allocated for hiring of adjunct faculty to offer additional new sessions of high-demand courses

New Academic Programs: Ph.D., DNP, M.S., B.S., PSM, Concentrations

TENNESSEE TECH

New programs were added across all colleges. In establishing new programs, TTU stayed abreast of important new career fields, such as a concentration in Digital Media, a minor in Innovation and Entrepreneurship, PSMs in Environmental Informatics and Public Safety and new concentrations in Cyber Security and High Performance Computing.

1. PSM in **Systems Engineering** (a new concentration in Professional Science Masters)
2. PSM in **Manufacturing Sustainability** (a new concentration in Professional Science Masters)
3. Engineering partnership with East Tennessee State University, Bachelor of **General Engineering** (Dual BS in General Engineering), 2016
4. **Nursing Doctorate (DNP)** in partnership with East Tennessee State University, 2017
5. **Education Technology** concentration at the Ed.S. level (Specialist in Education)
6. A new concentration in **Child Life** within the B.S. in Human Ecology
7. A new concentration in **Business Intelligence and Analytics** within the B.S.B.A in Business Management
8. Information Assurance and **Cyber Security** – A New concentration for BS in Computer Science, five new concentrations to replace the SPED – Modified program to meet the new state licensure changes
9. **Special Education** Interventionist K-5
10. Special Education Interventionist 6-12 English
11. Special Education Interventionist 6-12 History
12. Special Education Interventionist 6-12 Math
13. Special Education Interventionist 6-12 Biology
14. Specialist in Education Concentration in Library Science
15. **STEM Education** Concentration, Master's Specialist in Education
16. STEM Education Concentration, Ed.S. in Curriculum and Instruction
17. **Master of Accountancy**, 2017
18. Professional Science Master's Program in **Environmental Informatics**, approved by the PSM National Office on May 21, 2014
19. PSM in **Systems Engineering** (a new concentration in Professional Science Masters)
20. PSM in **Manufacturing Sustainability** (a new concentration in Professional Science Masters, Sept. 2014
21. MPS in **Health Care Administration** with an embedded Health IT Certification (a new concentration in Master of Professional Studies), Oct. 2014
22. Ph.D. in **Counselor Education and Supervision in Counseling Psychology** – LOI is being prepared for submission to Tennessee Board of Regents and THEC, 2017
23. Special Education non-licensure concentration, 2015
24. MA C&I **Applied Behavior Analysis** concentration, 2015
25. **Secondary Education** non-licensure concentration, approved at the February 25, 2015 meeting of the Academic Council
26. **Early Childhood** non-licensure concentration, 2015
27. Four new **Middle School concentrations** in compliance with TN state licensure changes, 2015
28. **Elementary Education** license update and curriculum change, 2015
29. New MA with initial licensure to attract students that would otherwise take the Post Bac Option for teacher licensure, 2015
30. **Education Technology** concentration at the Ed.S. level (Specialist in Education)
31. Cohort of Volkswagen Employees in 2+2 BS in **Engineering Technology** with Chattanooga State Community College. Located on-site at Volkswagen Academy in Chattanooga
32. **PhD in Engineering** (Cohort) with a Focus in Communications). Located on-site at Oak Ridge National Laboratory, 2015

33. **Religious studies** minor (College of Interdisciplinary Studies in collaboration with the departments of English, Sociology, and History), 2015
34. Established a university-wide minor in **Innovation and Entrepreneurship**, 2015
Entrepreneurship/Innovation certificate (College of Interdisciplinary Studies in Collaboration with the College of Business and the College of Engineering), estimated launch: Spring of 2016
35. A concentration in **Teaching English to Speakers of Other Languages** (TESOL)) within the existing Master of Professional Studies (MPS), 2016
36. Accelerated Bachelor of Science/Master of Science Program in **Mechanical Engineering**. Approved by TBR on Nov. 4, 2015
37. Accelerated Bachelor of Science/Master of Science Program in **Computer Science**, Nov. 4, 2015
40. Fast-Track MS Program in Mechanical Engineering, 2015
41. 1+1 MS Degree Program in Engineering, Fall 2015
42. A new concentration in **Data Science** within the BS in Computer Science, Fall 2016
43. Fast Track options Bachelor/Masters of Arts in **Curriculum & Instructions**, Spring 2016
44. Bachelor of Science in **Vehicle Engineering**, LOA approved, 2015, under final preparation in 2017
45. A new concentration in Parallel, Distributed and **High Performance Computing** within the BS in Computer Science, 2016
46. A new concentration in **Digital Media** within the existing B.F.A. in Fine Arts, 2013
47. A fast-track Master of Arts in **English**, 2016
48. Summer 2014 - Piloted Accelerated BSN Option for students with a prior bachelor's degree - first cohort to earn BSN in 18 months of continuous study

CLEVELAND STATE

Seven new academic programs including a new MS in **Biomedical Engineering**

Establishment of Major New Entities

TO ASSIST SCHOOLS (K-12)

- **Formation of Fenn Academy, CSU** <http://www.csuohio.edu/engineering/fennacademy/>
As Associate Dean for Academic Affairs initiated, planned, proposed, established and directed a consortium of Northeast Ohio high schools, corporations, and Fenn College of Engineering in order to establish pre-engineering programs in area high schools and support the students both academically and financially from high school through college via special courses, scholarships and co-op opportunities. We started with one high school partner and one corporate supporter. Today, Fenn Academy is composed of over 40 participating high schools and we have 14 satellite offices located in our partner schools within a five county region. Currently, ten companies and several non-profit entities support our efforts. As a result, an increasing number of students have decided to pursue an engineering career. Fenn Academy has been featured in numerous print and electronic media articles as well as television and radio programs and has been suggested by Utah educators as a model for the Utah System of Higher Education. Some recent media articles about Fenn Academy - available on the web:

Attracting the Best and Brightest : Cleveland State University's Fenn Academy by Dave Patton, PhD, CPPA Director , December 20, 2007)

http://www.imakenews.com/elettra/mod_print_view.cfm?this_id=981211&u=cppa&show_issue_date=F&issue_id=000227389&lid=b11&uid=0

New CSU Program to groom engineers, by Shawn Turner, *Crain's Cleveland Business*, September 12, 2005.

<http://www.crainscleveland.com/apps/pbcs.dll/article?AID=/20050912/FREE/50911003&SearchID=73255942174028>

TO PROMOTE RESEARCH & ECONOMIC DEVELOPMENT

▪ **Formation of Fenn Research & Development Institute (FRDI), CSU**

As Dean, in January 2007, proposed the establishment of an entity for faculty, research staff and students to work closely with the industry. This proposal was well accepted by the faculty and all the stakeholders and became a part of the College's strategic plan. The Institute's establishment was announced in my State of the College Address in March of 2009.

▪ **A Participant in the Establishment of the Ohio Aerospace Institute, CSU**

As CSU representative/coordinator, worked with a group of coordinators from nine other Ohio universities and NASA to establish the Ohio Aerospace Institute in 1989. The institute has since grown to become a major consortium involving NASA and Ohio Universities.

- ### ▪ **Formation of the Center for Diagnostics, Imaging, & Visualization, Ohio Aerospace Institute** Planned (1990-1993), established and chaired (1993-1998) the Center for Diagnostics, Imaging and Visualization (CDIV) at the Ohio Aerospace Institute. The center's objectives were as follows: 1. Fostering collaboration among Ohio Scientists in order to undertake cutting edge research projects that otherwise could not be accomplished due to lack of required facilities and expertise, 2. Making Ohio a magnet for DIV research and thereby attracting aerospace, medical, materials, and automotive industries, 3. Providing training and education to Ohio scientists and engineers, 4. Discovering and developing the application of sophisticated diagnostic techniques for industrial use.

The Center was involved in education, training and research applications in the areas of High Speed Flows, Unsteady Flows, Separated Flows, Multiphase Flows, Imaging Systems, Medical Imaging, Biomedical Flows, Combusting and Reacting Flows, Rotating Machinery and Reciprocating Engines, Particle Image Velocimetry, Flow visualization, Planar Laser Induced Fluorescences, Mie Scattering, CARS and LDV. Moreover, the center submitted research proposals, conducted workshops, seminars, international conferences, and fostered research in its areas of core competencies. The Center chairman reported to the Vice President and Director of Research at the Ohio Aerospace Institute.

- **Establishment of the Center for Advancements in Renewable Energy (CARE), CSU, 2010**
- **Establishment of two new research and design centers, Fenn College of Engineering, CSU**

TO PROMOTE FACULTY DEVELOPMENT

- **Establishment of the Division of Digital and Distance Education, 2015, TTU**
- **Establishment of the Center for Teaching and Learning Excellence, 2013, TTU**
- **Establishment of the College of Graduate Studies (formerly Graduate Studies Program), 2014, TTU**
- **Establishment of the Honors College, 2016 and College of Fine Arts, 2017, TTU**
- **Establishment of the Office of Quality Enhancement Plan, 2015, TTU**

TO PROMOTE COMMUNITY ENGAGEMENT AND SERVICE

- **Establishment of the Rural Development Institute, 2015, TTU**

TO PROMOTE STUDENT SUCCESS

- **Establishment of Math Emporium, 2014, TTU**
- **Establishment of a centralized tutoring and Learning Support Services, 2014, TTU**
- **Establishment of the Writing Excellence Studio, 2015, TTU**
- **Establishment of Campus Compass (a one-stop-shop student help space), 2013, TTU**
- **Construction of Tech Wall – an interactive wall with various student success content, 2016, TTU**
- **Formation of a new University STEM(M) Center (Science, Technology, Engineering, Mathematics, and Medicine) in collaboration with colleges of Science and Education, CSU**
Established in 2010 in collaboration with two other CSU colleges in order to bring together the expertise among three CSU colleges, namely: Engineering, Science and Education. This center was designed to be an interdisciplinary, inter-college entity for Science, Technology, Engineering, Mathematics, and Medicine STEM(M) and serves as a central focus and coordinating body for the University's activities in this educational endeavor. The goals are to encourage innovative STEM(M) education programs, enhance and strengthen community partnerships, increase grant activity, strengthen the K-12 student pipeline and nurture promising programs related to regional economic development in STEMM.
- **Knowledge and Innovation Center, CSU**
A joint proposal submitted by Nance College of Business and Fenn College of Engineering to offer R&D and educational programs in the areas of renewable energy, medical device design, technology certificate programs and onsite MBA program in the City of Beachwood.

Accreditation and Performance Funding

- A flawless SACSCOC reaffirmation of accreditation with no recommendations, TTU, 2016
- SACSCOC Compliance Certification – Completed the TTU Compliance Certification report and the QEP report and received an excellent preliminary report of the reaffirmation committee in 2015
- TTU Institutional Effectiveness (IE) Reports – academic programs and non-academic programs
- TTU Faculty Credential Database – Verification of faculty credentials and qualifications
- TTU Quality Enhancement Plan (QEP) – a new QEP topic was selected
- Completed the leadership Team Orientation for Reaffirmation of TTU Accreditation
- Flawless NCA accreditation of CSU (Fenn College segment)/CSU, 2011
- Best ABET re-accreditation on the record, successful internal and external comprehensive reviews of the programs, Fenn College of Engineering, CSU, 2011

- Initiated and completed the accreditation of the Co-op program by CAFCE – First U.S. Engineering College, CSU

PERFORMANCE FUNDING – TENNESSEE HIGHER EDUCATION COMMISSION

- Highest Performance Funding Score (97.5) – 2013-14 for FY 2015. Highest among all Tennessee Board of Regents and University of Tennessee System institutions (corresponding to incentive funding-5.4% additional appropriations). This includes such activities as: Academic Audits, accreditation activities, major field tests, senior exit exams, NSSE surveys and QEP projects
- Institutional Effectiveness (IE) Reports were obtained from non-academic programs
- Implementation of the Compliance Assistance Software for SACSCOC Reaffirmation
- Faculty Credentials work completed for SACSCOC purposes

Campus Construction Projects and Satellite Campuses

MAJOR BUILDING PROJECTS

- Participated in the selection of the architectural firm and reviewed the various design options for a \$90,000,000 Science and Research facility to be completed in 2018, TTU
- Proposed, received approval and worked with the architect on the design and site selection of an International House to be used for international student events and administrative offices, TTU
- Proposed and received approval for a complete renovation of a major campus building to move all Enrollment Management offices to one prime location (Jere Whitson Building), TTU

MAJOR CONSTRUCTION PROJECTS

- Proposed, received approval and assembled a team of experts to construct an interactive wall for existing and prospective students who visit the campus, TTU
- Supported the construction of a \$100K ROTC Rappel Tower, 2015, TTU

MAJOR SPACE RENNOVATION PROJECTS

- Proposed and participated in design and Renovation of Stilwell Hall space for student services and advising, CSU
- Provided funding and assistance for the establishment of a state-of-the-art Center for Teaching and Learning Excellence, TTU
- Provided funding and assistance for the establishment of a Math Emporium, TTU
- Provided funding and assistance for the establishment of a Writing Studio, TTU
- Identified a site and provided assistance for the establishment of a Makers' Space, TTU
- Proposed and acquired funding for substantial roof replacement of the engineering building, CSU
- Provided funding for renovation of several laboratory facilities, CSU
- Participated in the selection and move of the ROTC program into a new building, 2014, TTU
- Proposed a new home for and participated in the renovation of the new space for the Business Media Center (iCube) and the Innovation Institute at the Volpe Library, TTU
- Provided support for the new Child Development Lab in Southwest Hall, 2014, TTU
- Provided support for the creation of a new Play Scape for the Child Development Lab, TTU
- Participated in the selection of space and renovation of the new space for the Center for Teaching and Learning Excellence, TTU
- Oversaw the remodeling, renovation and security plans for engineering buildings, CSU

ESTABLISHMENT OF OFF-CAMPUS SITES

- Established 15 off-campus branch offices of Fenn Academy throughout Northeast Ohio, CSU
- Participated in the planning of an off campus TTU site in Lawrenceburg, TN

PROMOTING FACULTY PARTICIPATION AND CAMPUS SAFETY

- Asked each college dean to established a faculty committee to review the current and future building renovations/remodeling, TTU
- Asked for laboratory safety inspections of all labs with plans to immediately address any safety related issues, TTU

International Programs

STRATEGY

- Developed an international education program strategy, TTU, and:
 1. Approved the creation of a new Assistant Director position to enhance international recruitment
 2. Oversaw a new organizational structure for the international programs office
 3. Provided additional funding to support international recruitment
 4. Requested a new location for international programs (International House)
- Developed new avenues to attract international students from Europe, Russia, South American and South Korea. Continued to work toward recruiting students from Colombia, Japan, Brazil and Indonesia as well as the continuation of recruitment efforts from China, HK, Taiwan, Malaysia, Vietnam and Thailand

PARTNERSHIPS

- Signed new MOU's with universities in Kazakhstan (Karaganda State University, Northern Karaganda State, Zhetysu State University, and Rudny State University), Meliksah University in Turkey, Astafiev Krasnoyarsk State Pedogogical University in Russia, Hellenic American University in Athens, Robert Gordon University in Scotland-UK, Maritime Academy of Asia and Pacific-the Philippines, University of Pasig-in the Philippines, Technologiucal University of the Philippines, and Takachiho University in Tokyo, Japan

JOINT PROGRAMS

- Established a ½ + ½ + 1 MS program with Vellore Institute of Technology (ARAI) and the Automotive Research Association of India (ARAI) for a Pathway to a TTU MS Degree
- Established a ½ + ½ + 1 MS program with College of Engineering, Pune and the Automotive Research Association of India (ARAI) for a Pathway to a TTU MS Degree
- Established a 1 + 1 MS program Automotive Research Association of India (ARAI) for a Pathway to a TTU MS Degree

Experience Working with Collective Bargaining Units

- As Dean, Associate Dean and Chairman, acquired significant experience working with faculty, professional staff and classified staff collective bargaining units.

An Engaged Campus - Student, Faculty and Staff Engagement

CLEVELAND STATE

As Dean, continued to focus on engaging students, creating a welcoming and pleasant atmosphere for new students and responding to their needs. After over half a century, re-established the old Fenn College Freshman Picnic tradition. Also, established The State of the College Address, the Spring Gala fundraising event, Adopt A Freshman, Graduation Team event which identifies a team of faculty and staff responsible for each student's success and outlines a roadmap to graduation with clarity.

Results: In an independent 2011 survey by Eduventures, Inc. performed for CSU in responding to the question, "How would you rate your overall campus experience?", engineering and two other CSU colleges shared the top rating. Additionally, Fenn College scored the highest rating on the categories of: "I will recommend CSU to a friend", and "I feel like I am part of the campus community at CSU" [*New Student Satisfaction: Perceptions of University Support Services, EDUVENTURES Research and Consulting for Higher Education, March 2011*]

TENNESSEE TECH

Engagement efforts and initiatives at TTU are numerous. They encompass a variety of initiatives including High Impact Practices, such as: Study Abroad, Service Learning, Work Experience, Undergraduate Research, Internship and Co-op. For faculty and staff, we established various leadership programs, development funds for staff, Kaizen programs, health and wellness and Togetherness programs and activities.

Marketing, Public Relations and National/Global Media Coverage

WORKING WITH MEDIA OUTLETS

Involvement with various media outlets to provide adequate exposure of the institution's accomplishments. A partial list of media outlets that I have worked with to publish the accomplishments of my institutions:

- **CNBC** - <http://www.cnn.com/id/31256233>
- **Business Week** - http://www.businessweek.com/magazine/content/09_27/c4138greenbusi149054.htm
- **CBS Evening News**
- **Reuters UK** - <http://uk.reuters.com/article/environmentNews/idUKTRE55A5PD20090611>
- **Reuters India** - <http://in.reuters.com/article/environmentNews/idINTRE55A5PD20090611>
- **Yahoo UK and Ireland** - <http://uk.news.yahoo.com/22/20090611/twl-environment-us-newyork-energy-1202b49.html>
- **Crain's Cleveland** - <http://www.crainscleveland.com/article/20090612/BLOGS03/906129961/-1/BLOGS>
- **Scientific American** - <http://www.scientificamerican.com/section.cfm?id=partnernews&category=&year=2009&month=6&offset=16>
- **International Business Times** - <http://www.ibtimes.com/articles/20090611/nyc-water-towers-seen-as-ground-quot-wind-farms-quot.htm>

- **SiloBreaker** - http://www.silobreaker.com/nyc-water-towers-seen-as-ground-for-wind-farms-16_2262380586951770129
- **Calgary Herald** - <http://www.calgaryherald.com/business/turbines+could+turn+into+urban+wind+farms/1686210/story.html>
- **STV.TV** - <http://news.stv.tv/environment/102020-nyc-water-towers-seen-as-ground-for-wind-farms/>
- **Topix** - <http://www.topix.com/energy/wind-energy/2009/06/nyc-water-towers-seen-as-ground-for-wind-farms>
- **Energy For Us All** - Energy For Us All - <http://www.energyforall.com/>
- **ClimateArk.com** - <http://www.climateark.org/shared/reader/welcome.aspx?linkid=129849&keybold=solar%20AND%20%20energy>
- **Global Good News** – Science Good News - <http://www.globalgoodnews.com/science-news-a.html?art=124477095625774670>
- **Earth-Stream** - http://www.earth-stream.com/Earth/Clean-Energy/NYC-water-towers-seen-as-ground-for-wind-farms-_18_151__175325.html
- **Planeta Azul** – <http://www.planetaazul.com.mx/www/2009/06/12/nyc-water-towers-seen-as-ground-for-wind-farms/>
- **Earth Friendly Grocery Bags** - <http://earthfriendlygrocerybags.com/8666-nyc-water-towers-seen-as-ground-for-wind-farms>
-
- **SkyScraperCity.com** - <http://www.skyscrapercity.com/showthread.php?p=38244934>

SAMPLE MEDIA RECOGNITIONS FOR ADMINISTRATIVE ACCOMPLISHMENTS

- “TTU board approves new College of Fine Arts”, Laura Militana, Herald-Citizen, Cookeville, TN, News Section, June 19, 2017 <http://herald-citizen.com/stories/ttu-board-approves-new-college-of-fine-arts,21815?>
- Colleges seek to expand schools of engineering, The Cleveland Plain Dealer, Published: Sunday, October 17, 2010
- When It Comes to Enrollment Growth, The Fenn College of Engineering is Setting the Pace, CSU Perspective, Winter 2011
- Cleveland State University striving to turn research into jobs, The Cleveland Plain Dealer, Published: Friday, August 27, 2010, 5:45 PM
http://www.cleveland.com/business/index.ssf/2010/08/cleveland_state_university_striving_to_turn_research_into_jobs.html
- \$475,000 grant to support “Engineering Across the Pipeline”, The Cleveland Stater, Thursday, April 9, 2009
- Fenn College of Engineering, Perspective, Cleveland State University, pp.5, Spring 2009
<http://www.csuohio.edu/class/com/clevelandstater/news/news101508.html>
- Creating a Path for Future Engineers – Program Encourages High Schoolers, The Plain Dealer, Metro Section, B1, by Angela Townsend, Plain Dealer Reporter, Monday, November 26, 2007

Research and Scholarly Activities

Authored or co-authored over 80 publications and books, made nearly 60 technical presentations and have been recognized for contributions in the fields of fluid mechanics, jet engine design, combustion, higher education and agile manufacturing. Also, co-edited three volumes of proceedings of an international conference on laser anemometry published by the American Society of Mechanical Engineers. In earlier years of my career as a faculty member, I obtained a significant amount of external funding in support of my research studies

2003 DISTINGUISHED RESEARCH AWARD, CLEVELAND STATE

One of a few academic contributors to Vision 2020 report. “This study was also stimulated by a request from the White House Office of Science and Technology Policy for industry advice on how the U.S. government could better allocate R&D funding to advance the manufacturing base of the U.S. economy.” “The contributors to Vision 2020 included technical and business leaders in the U.S. Chemical Industry who studied the factors affecting the competitiveness of the industry in a rapidly changing business environment and set out to develop a vision for its future.” “This landmark document establishes a long-term path for the future of the chemical industry based on key market, business, and environmental needs.”

SAMPLES, AMONG OVER 80 PUBLICATIONS

- B. Ghorashi, “The Design and Anatomy of A First-Year Connection Course for Chemical Engineering Students”, Chemical Engineering Education Journal, Vol. 54, No. 3, Summer 2020.
- A Systematic Approach to Retaining and Increasing the Number of Engineering Graduates in Order to Strengthen a Regional Economy, Management of Engineering & Technology, 2008, PICMET 08, Cape Town, South Africa, July 27 – 31, 2008, ISBN: 978-1-890843-17-5, NSPEC Accession Number: 10152099, 2008
- Rupture of Thin Liquid Films Utilizing Binary Fluid Mixtures, R. Gorla, L. Byrd, D. Kost, and B. Ghorashi, International Journal of Fluid Mechanics Research, Vol. 32, No.6, 2005
- Determination of Output from A Unit of An Enterprise Architecture in Response to A Change in the Mode of Operation – A Blueprint for Process Modeling and Simulation, B. Ghorashi and J. Stafford, Proceedings of the 2005 Portland International Conference on Management of Engineering and Technology, PICMET 05, 2005
- Agile Manufacturing Practices in the Specialty Chemical Industry: An Overview of the Trends and Results of a Specific Study, A. Guisinger and B. Ghorashi, International Journal of Operations & Production Management, Vol. 24 No. 6, pp. 625-635, 2004
- Heat Transfer in a Thin Liquid Film in the Presence of Electric Field for Non-Isothermal Interfacial Condition, R. S. R. Gorla, J.E. Gatica, B. Ghorashi, P. Ineure, and L. W. Byrd, International Journal of Fluid Mechanics Research, Vol. 29, No. 2, 2002
- Heat Transfer in a Thin Liquid Film in the Presence of Electric Field, R.S.R. Gorla, J.E. Gatica, B. Ghorashi, P. Ineure, Chemical Engineering Communications, 191: 1-14, 2004
- Application of Agility Principles to Manufacturing Industries – The Assessment Methodology, B. Ghorashi, N. Das, and A. Ghorashi, The Ohio Journal of Science, Vol. 102, No. 1, March 2002
- A Case Study of the Application of Agility Principles to Adhesive and Sealant Manufacturing Industries, N. Das, B. Ghorashi, and A. Ghorashi, Proceedings of the 2001 Portland International Conference on Management of Engineering and Technology, PICMET 01
- Mixing of Glass Fibers with Nylon 6,6, S. Javangula, B. Ghorashi, and C.C. Draucker, Journal of Material Science, 34 (1999) 1-9

BOOKS

Best Selling Author List

How to Become an Exceptionally Successful Young Person - A Guide to Early Planning and A Roadmap to Success, Bahman Ghorashi, i-Universe Publisher, 2003. ISBN No. 0-595-28709-3. The ISBN for the hardcover edition: 0-595-65828-8 http://www.amazon.com/s/ref=nb_ss_b?url=search-alias%3Dstripbooks&field-keywords=bahman+ghorashi

- Rated Number 6 in the category of “Books for the Smart and Successful Woman” by Gwen Jimmere in the list of “must-reads for success at anything, January 2, 2009, Carrie and Danielle
- Best Selling Author List (As of November 22, 2020): <https://www.amazon.com/gp/bestsellers/books/271595011>

Edited Technical/Scientific Books

- LASER ANEMOMETRY-ADVANCES AND APPLICATIONS, Volume 3, Editors: Bahman Ghorashi and Alexander Dybbs, ASME Publications, ISBN No. 0-7918-0654-5, Library of Congress Catalog Number 87-73121, 1992
- LASER ANEMOMETRY-ADVANCES AND APPLICATIONS, Volume 1, Editors: Alexander Dybbs and Bahman Ghorashi, ASME Publications, ISBN No. 0-7918-0654-5, Library of Congress Catalog Number 87-73121, 1991.
- LASER ANEMOMETRY-ADVANCES AND APPLICATIONS, Volume 2, Editors: Alexander Dybbs and Bahman Ghorashi, ASME Publications, ISBN No. 0-7918-0654-5, Library of Congress Catalog Number 87-73121, 1991

Supplementary Books

- Lean and Agile, A Supplementary book for the Undergraduate/graduate Agile Manufacturing class, Cleveland State University-Barnes & Nobles Bookstore, September 2004.
- Transport Phenomena, A Supplementary book for the Undergraduate Chemical Engineering Transport Phenomena class, Cleveland State University, to become available at Barnes & Nobles Bookstore, 2004. In Press.
- Lecture Notes in Agile/Lean Manufacturing, A supplementary book for the undergraduate/ graduate Agile Manufacturing class, Cleveland State University, May 2003.
- Lecture Notes in Fluid Mechanics, A Supplementary book for the Undergraduate Fluid Mechanics class, Cleveland State University-Barnes & Nobles Bookstore, January 2003.

Co-authored Technical Books

- Flow Diagnostics, Chemically Reacting Turbulent Flow Modeling and Turbulent Mixing, (A summary of project studies in combustion), [Washington, DC: National Aeronautics and Space Administration; Springfield, Va.: National Technical Information Service, distributor, 1995], *Govt.doc#* NAS 1.26:197348, *OCLC #*32828488, *Isn/std #*0830-H-14 (MF), 1995.
- Simplified Jet-A kinetic mechanism for combustor application, Chi-Ming Lee, Krishna Kundu and Bahman Ghorashi, [Washington, DC: National Aeronautics and Space Administration; Springfield, Va.: National Technical Information Service, distributor, 1993]. NASA Technical Memorandum Series: 105940, Shipping list no.: 93-0441-M, *Govt. doc#* NAS 1.15:105940, *OCLC #*28367547, *Isn/std #* N 93-15504 NASA, 0830-D (MF), 1993

Contributions to Books

Research articles from the publications section have appeared in the following books:

- HEAT AND MASS TRANSFER: AN ERA OF CHANGE, Nova Science Publishers, 1992
- MULTI-PHASE TRANSPORT AND PARTICULATE PHENOMENA, Volume 3, Hemisphere Publishing, Springer-Verlag, 1990
- MULTI-PHASE TRANSPORT AND PARTICULATE PHENOMENA, Volume 1, Hemisphere Publishing, Springer-

Verlag, 1990

- MULTI-PHASE TRANSPORT AND PARTICULATE PHENOMENA, Hemisphere Publishing, Springer-Verlag, 1987
- ALTERNATIVE ENERGY SOURCES VII, Hemisphere Publishing, Springer-Verlag, 1987
- ALTERNATIVE ENERGY SOURCES V, Elsevier Science Publishers, 1983
- ALTERNATIVE ENERGY SOURCES IV, Ann Arbor Science Publishers, 1983
- LECTURE NOTES IN PHYSICS: 75, Structure and Mechanisms of Turbulence, Edited by H. Fiedler, Springer-Verlag, Berlin, ISBN 3-540-08765-6, 1977

CONTRIBUTIONS TO MAJOR PUBLISHED REPORTS

- TECHNOLOGY VISION 2020/ THE U.S. CHEMICAL INDUSTRY REPORT

<http://www.ccrhq.org/vision/welcome.html>

<http://www.chemicalvision2020.org/vision.html>

WORKSHOP PROCEEDINGS

- Proceedings of the First CSU Agile Manufacturing Workshop, Mather Mansion, Cleveland State University, August 7, 1997 (B. Ghorashi and A. Guisinger)
- Concept Study on a Toroidal Combustor, B. Ghorashi, Proceedings of the Low NO_x HSR Workshop, September 26-27, 1990, NASA, Lewis Research Center
- Three-Dimensional Imaging Versus Two-Dimensional Techniques, planar Reacting Shear Layer Experiment Review Proceedings, Internal Fluid Mechanics Division, NASA, Lewis Research Center, January 1989

SAMPLE TECHNICAL PRESENTATIONS

- An Alternating Pulsed-Staged-Fuel Combustor Design, Presented at the Combustion Branch, NASA Glenn Research Center, May 2003
- Application of Agile Manufacturing Principles to Chemical Engineering Curriculum, Presentation to the Industrial Visiting Committee of ChE, Cleveland State University, September 2003
- Application of Agility Principles to Manufacturing Industries – The Assessment Methodology, Presentation at The Ohio Academy of Science, Columbus, Ohio, April 2002
- Application of Just-In-Time Principles to the Chemical Industry, A.F. Abu-Ali, and B. Ghorashi. Proceedings of the 1999 Portland International Conference on Management of Engineering and Technology, PICMET 99, Vol-1, Portland, Oregon, July 1999
- A Comparison of Traditional and Integrated Research and Development Methodologies, D.P. Muller, and B. Ghorashi, Portland International Conference on Management of Engineering and Technology, PICMET 99, Vol-1, Portland, Oregon, July 1999
- Development of A Gap Assessment Strategy for R&D Management, A. Shah, and B. Ghorashi, Portland International Conference on Management of Engineering and Technology, PICMET 99, Vol-1, Portland, Oregon, July 1999
- Agile Manufacturing Research, Presentation to New Graduate Students, CSU, 2001, 2000, 1999, 1998, 1997, 1996, 1995
- Agile Manufacturing Practices in the Specialty Chemical Industry, Presented at B. F. Goodrich Specialty Chemicals Division, Brecksville, Ohio, November 1997
- New Combustor Design Concepts, presented at NASA Lewis Research Center, Internal Combustion Branch, Propulsion Systems Division, November 1994
- Flow Visualization Studies of a Toroidal Low NO_x Combustor, Paper No. 184i, AIChE Annual Meeting, San Francisco, 1994

SAMPLE RESEARCH REPORTS TO FUNDING AGENCIES

- Flow Diagnostics, Chemically Reacting Turbulent Flow Modeling and Turbulent Mixing, (A Summary of Project Studies in Combustion), Final Report to NASA, GHO-R14, January 1995
- Development of Imaging Techniques for Utilization in Turbulence and Combustion Research, Final Report to NASA, GHO-R13, 1994
- Flow Mixture Patterns in a Lean Pre-Mixed, Pre-Vaporized Combustor Under Advanced Supersonic Cruise Conditions, Final Report, GHO-R16, April 1994
- Toroidal Combustor Concept Studies, B. Ghorashi, Report to the Internal Combustion Branch (Dr. Chun), Propulsion Systems Division, NASA Lewis Research Center, December 1993
- Toroidal Combustor Concept Studies, B. Ghorashi, G. McBeath and S. Taruvai, Report to the Internal Combustion Branch, Propulsion Systems Division, NASA Lewis Research Center, November 1992

SAMPLE GRANTS

- | | |
|--|--------------|
| ▪ <u>Upper Stage Engine Test Article Lead</u> , NASA Glenn Research Center | \$ 344,595 |
| ▪ <u>Engineering Across the Pipeline</u> , Co-PI, Ohio Board of Regents | \$ 982,353 |
| ▪ <u>Fenn Academy Pathways to Engineering Summer Academy</u> , Co-investigator, Ohio Board of Regents, 2009 Regents STEM Academies, 2009 | \$ 171,383 |
| ▪ <u>Fluid Flow and Mixing Process in a Circular Combustor</u> , Continuation, NASA | \$ 99,298 |
| ▪ <u>Development of an Image Processing and Analysis Technique for Utilization in Turbulence and Combustion Research</u> , Continuation, NASA, Lewis Research Center | \$ 81,774 |
| ▪ <u>Fluid Flow and Mixing Process in a Circular Combustor for the HSCT Applications</u> , Continuation, NASA, Lewis Research Center | \$ 88,484 |
| ▪ <u>Flow Visualization Studies of the Mixing Process in a Proposed Circular Combustor for the HSCT Application</u> , Continuation, NASA Lewis Research C | \$ 80,989 |
| ▪ <u>Development of an Image Processing and Analysis Technique for Utilization in Turbulence and Combustion Research</u> , Supplement to GHO R13, NASA Lewis Research Center | \$ 86,000 |
| ▪ <u>Development of an Imaging Technique for Utilization in Turbulence and Combustion Research</u> , Continuation for the Second Year, NASA Lewis | \$ 86,206 |
| ▪ <u>Development of an Image Processing and Analysis Technique for Utilization in Turbulence and Combustion Research</u> , NASA Lewis Research Center | \$ 100,000 |
| ▪ <u>Principal Investigator and Project Director: A Fundamental Study of Fluid Jet Characteristics</u> , Cleveland Advanced Manufacturing Program, Co-Investigator: E. Graham | \$ 81,295 |
| ▪ <u>Choose Ohio First Scholarship Program</u> – participated in partnership with CSU College of Science and other institutions (CWRU). The partnership received funding over a five-year period, July 2008 | \$ 2,000,000 |
| ▪ <u>Space Grant Colleges/Consortia NASA's National Space Grant College and Fellowship Program</u> , Ohio Aerospace Institute, Proposal Co-Authors: J. Essman, Ohio University, Faghri, Wright State University, B. Ghorashi, Cleveland State University, R. Irey, University of Toledo, L.A. Kennedy, Ohio State University, J. Padovan, University of Akron, D.C. Stouffer, University of Cincinnati, P.J. Sweeney, University of Dayton, J. Wallace, Case Western Reserve University. Funding for five years: | |
| Fiscal Year 1989 | \$ 75,000 |
| Fiscal Year 1990 (funding to support fellowships) | \$ 100,000 |
| Subsequent Years on a per year basis (subject to matching funds) \$225,000 x 3 | \$ 675,000 |
| ▪ <u>Engineering Management</u> , The Ohio Learning Network grant, funds | |

for development of the following modules: Agile manufacturing,
Just-in-time manufacturing, Co-PIs for development of other modules
include professors: Gatica, Shah, Javangula and IEM Group

\$ 118,000

CHAIRMANSHIP OF INTERNATIONAL SCIENTIFIC CONFERENCES AND SYMPOSIUM SESSIONS

- Chairman, ASME, 4th International Conference on Laser Anemometry, with Alexander Dybbs as co-chairman
- Session Chairman, Agility in Manufacturing, Portland International Conference on Management of Engineering and Technology, Portland, Oregon, July 1997
- Session Chairman, Measurement Techniques, Session III, 4th Miami International Symposium on Multi-Phase Transport and Particulate Phenomena, December 1986
- Invited Session Chairman, 33rd Heat Transfer and Fluid Mechanics Institute, Scheduled for June 1993
- Session Chairman, Session A1: Heating/Cooling in Commercial Buildings, Solar Collectors, 8th International Conference on Alternative Energy Sources, 1987
- Invited by the Case Western Reserve University, Professor Alexander Dybbs, to be on the Organizing Committee of the Fourth International Conference, Laser Anemometry - Advances and Applications
- Invited Session Chairman, 32nd Heat Transfer and Fluid Mechanics Institute, June 1991
- Session Chairman, Chemical Reactions and Combusting Flows, 4th Intern. Conf. on Laser Anemometry, 1991

NATIONAL TASKFORCE AND PROFESSIONAL ORGANIZATIONS MEMBERSHIPS

- Member of the Technology and Manufacturing Competitive Task Group. Members of the task group include the American Institute of Chemical Engineers, The American Chemical Society and The Chemical Manufacturer's Association. The TMCTG considered the input provided by these taskforces to develop a road map for industry and government to follow to help create a unified vision for the industry
- Manufacturing Operations Group, American Institute of Chemical Engineers - The taskforce met through teleconferences, and meetings which took place in Washington, D.C. Worked with members from Phillips Petroleum Company, Eastman Kodak, Hoechst Celanese, Air Products, BP Chemicals, Dow, Dupont Medical Products, TRW Safety Systems, Scios Nova Inc., Shell Chemical Company, Mallinckrodt Chemical Company and a legal counsel.
- International Activities Committee, American Institute of Chemical Engineers, past member of the AIChE's International Activities Committee
- National Center for Post-secondary Improvement, member of the Cleveland panel. NCPI was a collaborative research venture among Stanford University, University of Pennsylvania and University of Michigan, 1997.

REVIEWER (JOURNALS AND SYMPOSIUMS)

- American Chemical Society, the Petroleum Research Fund
- Invited Reviewer, Industrial and Engineering Chemistry
- Research, American Chemical Society, 1988
- Invited Reviewer, International Journal of Energy Systems, 1985
- AIAA Air Breathing Propulsion Technical Committee Session, AIAA 27th Aerospace Sciences Meeting, 1988
- Fourth International Conference on Laser Anemometry, Cleveland, Ohio, August 1991
- NASA Small Business Innovation Research (SBIR) Commercial Potential Review, and SBIR phase II Commercial review, 1998.

Abbreviated List of Honors and Awards

- 2017 Recognition by TTU President and Board of Trustees for accomplishments and achievements as Provost, June 2017 Board Meeting
- The 2006 recipient of Administrative Award
- 2005 CSU Recognition Award for Teaching, Research, and Contributions to the Profession
- 2003 Distinguished Research Award
- Certificate of Commendation from The Ohio House of Representatives, the 112th General Assembly
- Leadership Excellence Coin, TTU Army ROTC
- Fenn College of Engineering Recognition for achievements as Dean
- CSU Board of Trustees' Resolution of Recognition
- Board of Township Trustees of Hudson Resolution of Distinguished Service
- National Aeronautics and Space Administration Certificate of Recognition for research
- The American Society for Engineering Education Certificate of Recognition for research
- Graduate School Leadership Award, The Ohio State University
- Presented with the Leadership Excellence Coin by Lt. Colonel Steve Peterson, TTU Army ROTC, Feb. 28, 2015.
- Fenn College of Engineering Recognition plaque for achievements as Dean, Sept. 22, 2011, College of Engineering Faculty Meeting, specifically for:
 - ✓ Formation of Fenn Academy and increase in the undergraduate and graduate enrollment and higher quality first year students.
 - ✓ Preparing the College's strategic plan for the years 2010 – 2015.
 - ✓ Initiating FRDI (Fenn Research & Development Institute).
 - ✓ Establishing faculty and staff awards.
 - ✓ Delivering annual State of the College address and hosting student awards/steel ring ceremony.
 - ✓ Increasing major gifts and scholarship funds.
 - ✓ Adding new faculty
 - ✓ Co-op program accreditation and internationalization of co-op.
- Certificate of Appreciation for Excellent Service, Participation and Leadership on the Cleveland Engineering Society Board of Directors, June 30, 2011. [Kenneth Alfred, Executive Director and David Peace, President]
- 2006 CSU Administrative Award in recognition of outstanding administrative achievements
- Lakewood Board of Education, publicly recognized on behalf of Fenn Academy and Fenn College of Engineering Scholarship Program, December 03, 2007
- 2003 Distinguished Faculty Research Award, Cleveland State University, 2003
- Resolution No. 10/22/03 (03-55) by the Board of Trustees of Cleveland State University congratulated Bahman Ghorashi
- Resolution No. 93-12-19-E by the Board of Township Trustees of Hudson Township, Summit County, Ohio
- Certificate of Commendation from The Ohio House of Representatives, the 112th General Assembly of Ohio, Representatives Mike Stinziano and Vern Riffe, Speaker of the Ohio House of Representatives
- Recognized by Dr. Michael Salkind, President of the Ohio Aerospace Institute as "One of the key participants in the creation of OAI"
- The National Aeronautics and Space Administration and the American Society for Engineering Education Certificate of Recognition for research contributions made through the 1987 Faculty Fellowship Program
- The NASA and the American Society for Engineering Education Certificate of Recognition for research contributions made through the 1988 Summer Faculty Fellowship Program
- Nominated by Cleveland State University President, Dr. Walter Waetjen, Vice President and Provost, Dr. John Flower, Dean of Graduate College, Dr. Georgia Lesh-Laurie and Chemical Engineering Department Head, Dr. George Coulman for the Dreyfus Teacher-Scholar Award for "Young faculty members with exceptional promise who combine interest and demonstrated ability in teaching and performing imaginative research"

- Letter of Appreciation from the Hudson Township Trustees Chairman, Mr. Daniel Moos, for community services performed as a member of the Hudson Township Architectural Design Guideline Steering Committee
- Letter of Commendation from Dr. Jules B. LaPidus, Vice Provost and Dean of Graduate School, The Ohio State University
- Graduate School Leadership Award from the Graduate School of the Ohio State University
- Robert's Fellowship, Chemical Engineering Department, Ohio State University

SAMPLES OF INVITED LECTURES AND PRESENTATIONS

U.S. and International Academia

- Stanford University, Aeronautics and Astronautics Engineering Department, Palo Alto, California
- University of California- Berkeley, Mechanical Engineering Department, Berkeley, California
- The Ohio State University, Chemical Engineering Department, Columbus, Ohio
- University of Illinois at Chicago, Dep. of Pharmaceutics, School of Pharmacy, Chicago, Illinois
- Columbia University, Accelerating Social Innovation in Engineering Education, New York, New York, Fall 2011
- University of Oxford, Department of Engineering Science, Oxford, England
- Cambridge University, Department of Engineering, Cambridge, England
- University of Manchester, Department of Engineering, Simon Engineering Laboratories, Manchester, England
- Imperial College of Science and Technology, Department of Aeronautics, London, England
- University of Applied Sciences, Wuerzburg-Schweinfurt, Germany (scheduled for May 2019)

Government Research Centers

- NASA, Kennedy Space Center, STS-129 STEM Workforce Forum, November 15, 2009, Cocoa Beach, Florida
- NASA, Glenn Research Center, Combustion Branch
- NASA, Lewis Research Center, Joint Institute for Aerospace Propulsion and Power
- NASA, Lewis Research Center, Aerothermochemistry Branch
- NASA, Lewis, Internal Fluid Mechanics Division, Turbulence Modeling Group Seminars
- NASA, Lewis Research Center, Propulsion Systems Division, Combustion Technology Branch

Industry

- AMOCO Research Center, Exploratory Polymer Group, Naperville, Illinois
- B.F. Goodrich Specialty Chemicals Division, Brecksville, Ohio
- Ford Motor Company, Scientific Research, Chemistry Department, Dearborn, Michigan
- BP America, Materials Division Director and the Imaging Group Director, Warrensville Research Center, Warrensville, Ohio

GRADUATE STUDENTS AND RESEARCH ASSISTANTS

- Supervised 43 graduate students and Research Assistants plus several post-doctoral fellows

Teaching

2005 CSU Merit Recognition Award for Teaching, Research, and Contributions to the Profession

WEB-BASED COURSE DEVELOPMENT

Development of modules offered in Spring Semester 2004 on the web for prospective students who could not attend the campus due to distance or scheduling conflicts

TEACHING AND EDUCATIONAL PUBLICATIONS (Please see the publications section for additional information):

- Lean and Agile, A Supplementary book for the Undergraduate / graduate Agile Manufacturing class, Cleveland State University-Barnes & Nobles Bookstore
- Lecture Notes in Fluid Mechanics, A Supplementary book for the Undergraduate Fluid Mechanics class, Cleveland State University-Barnes & Nobles Bookstore
- Transport Phenomena, A Supplementary book for the Undergraduate Chemical Engineering Transport Phenomena class, Cleveland State University, to become available at Barnes & Nobles Bookstore, In Press.
- A Systematic Approach for Long-Range Laboratory Development
- Teaching of Engineering Courses Through A Television Network System
- Teaching of a Rheology Course in a Television Studio With Live Class Participation

TEACHING/LEARNING WORKSHOPS

- On a self-initiative basis, organized the First Teaching Workshop in the recent history of Fenn College (at least the last twenty years).
- As Associate Dean, organized the second "Teaching/Learning Workshop" for engineering faculty, April 27, 2006.

TEACHING AT CLEVELAND STATE UNIVERSITY

1. Separation Processes (CHE 431), Fall 1978, 1979, 1980, 1981, and 1982
2. Chemical Engineering Thermodynamics (CHE 323), Winter 1980
3. Transport Phenomena (CHE 375), Summer 1980, Fall 93, 96, 97, 98, 99, Fall 2002, Fall 2004, Fall 2012
4. Material and Energy Balances (CHE 202), Summer 1980
5. Special Topics, Solar Engineering and Rheology (CHE 490)
6. Process Device & System Synthesis (CHE 204), Summer 1985
7. Unit Operations Lab. I (CHE 411), Fall 1985 and 1987, (CHE 420, Semester Course) Spring 1999, 2001.
8. Unit Operations Laboratory II (CHE 412), Spring 1979, 1980, 1982, 1984, 1987, 1996, 1998
9. Principles and Applications of Rheology (CHE 632/595), Winter 1979, Fall 1983, Spring 1988, Spring 1993
Spring 1996.
10. Advanced Transport Phenomena (CHE 606/506/ESC 721), Winter 1979, 1981, 1982, and Fall 1983
11. Principles of Solar Engineering (CHE 461), Spring 1981
12. Fundamentals of Polymers (CHE 582), Winter 1981
13. Advanced Topics, Unsteady Flow (CHE 634/ESC 780), Spring 1981
14. Special Topics (CHE 691), Transport, Rheology, Solar Engineering, System Focus, Sum. & Fall 1979, Sp. 1981, Sum. 1997, Winter 1998
15. Special Topics (CHE 691), Rheology-Viscometric Measurements.
16. Special Topics (CHE 691), Solar Engineering, Design and Operation of Solar Collectors.
17. Turbulent Flow (CHE 634/734), Winter 1982, Fall 1986. Fall 1992, Fall 1993.
18. Process Design and Cost Estimation II (CHE 454), Spring 1982, 1983, 1984, (CHE 441, Process Design II, Semester course) Spring Semester 1999, 2000, 2013.
19. Engineering Science Thermodynamics (ESC 321), Summer 1983, Fall 1986.
20. Fluid Mechanics (ESC 301), Fall 1984, Winter, Spring and Summer 1985, Spring 1989, Fall 1991, Winter 1992, Winter 1994, Summer 1994, Fall 1994, Winter 1995, Spring 1995, Fall 1995, Winter 1996, AY

- 92/93,93/94, 95/96, 97, Summer 97, Fall 97, Winter 98, Fall Semester 2000, Spring 2001, Fall 2001, Fall 2002, Spring 2003, Fall 2003, Spring 2004, Spring 2005, Summer 2012, Spring 2013
21. Polymer Engineering (CHE 480), Winter 1985
 22. Unit Operations Laboratory {a new course} (CHE 420), Spring 2000
 23. Process Design and Cost Estimation I {a new course}, Fall Semester 1998, 1999
 24. Process Design and Cost Estimation I (CHE 453), Winter 1986 and 1988
 25. Acoustic Excitation Phenomenon (CHE 696/ESC 796), Spring 1986
 26. Material Science (ESC 270), Co-instructor, Spring 1994
 27. Principles of Rheology (CHE 495/595), Spring 1994
 28. Combustion Systems I (CHE 660/760), Winter 1995
 29. Combustion Systems II (CHE 661/761), Spring 1995
 30. Master's Thesis (CHE 690)
 31. Master's Project (CHE 691)
 32. Doctoral Dissertation (CHE 899)
 33. Agile Manufacturing (CHE 451/551, initially offered under Special Topics), Summer 97, 98, 99, (CHE 451/551) Fall 2000, Fall 2001, Spring 2003, Spring 2004, Fall 2004, Fall 2005, Fall 2006, Fall 2012
 34. Transport Phenomena-a new course in Transport (CHE 306), Fall 2002
 35. Selected Topics - Agility in Higher Education (CHE 494), spring 2006
 36. Heat Transfer, MET 420, Fall 2011
 37. Thermodynamics, MET 345, Fall 2011
 38. Fluid Dynamics, MET 350, Spring 2012
 39. New (semester course) Transport Phenomena (CHE 306), Fall 2012

TEACHING AT TENNESSEE TECH UNIVERSITY

1. Chemical Engineering Senior Design II (CHE 4420), team taught, Spring 2017, Spring 2019, Spring 2020
2. Introduction to Rheology (CHE 6810/4973/4340), Fall 2018, Fall 2019, CHE 4340, Fall 2020
3. Introduction to Chemical Engineering (CHE 1010), Fall 2018, Fall 2019
4. Agile Manufacturing and Systems Thinking (CHE 6810/4973), Spring 2019, Spring 2020, CHE 4560, Sp. 2021
5. Introduction to Research (CHE 4990), Spring 2019, Spring 2020
6. Transfer Science I (CHE 3111), Fall 2020
7. Transfer Science II (CHE 3121), Spring 2021

TEACHING AT NASA

- Introduction to Turbulent Flow, taught to chemical and mechanical engineers at National Aeronautics and Space Administration, Lewis Research Center

TEACHING AT THE OHIO STATE UNIVERSITY

- Assisted in the teaching of Fluid Mechanics, Mass Transfer and Heat Transfer in the Dept. of Chemical Eng.

TEACHING IN THE TELEVISION STUDIOS OF CSU

- Development of an audio-visual graduate level rheology course, taught in the television studios of CSU, 1979

TEACHING AT THE UNIVERSITY OF APPLIED SCIENCES (FHWS), WUERZBURG-SCHWEINFURT, GERMANY

- Agile Organizations, May 2019

DISTANCE-LEARNING EDUCATIONAL TELENETWORK TEACHING PROGRAM

Participated in the planning stage of the Ohio Aerospace Institute (OAI) Educational Telenetwork Teaching Program. OAI, in concert with nine Ohio universities, developed an Educational Telenetwork Program. The program curriculum consisted of graduate level engineering and science courses which were transmitted to all interested sites and

institutions within the State of Ohio. Also, similar programs in other states were reviewed.

OTHER TEACHING RELATED EFFORTS

Developed a new teaching/learning style based on active participation and involvement of students in class, Spring Semester 2003. Also established the Center for Teaching and Learning Excellence at TTU.

Additional Service to the University and Community

Certificate of Commendation from the Ohio House of Representatives, the 112th General Assembly

"...A remarkable individual, combining community concern and commitment with selfless initiative to become a dynamic force in the university area ... with admirable dedication you have directed yourself toward meaningful involvement in your field of study and research and as a result you have gained the respect of the entire community ... your many accomplishments have earned you the esteem of all those with whom you have worked and have helped to guarantee a high level of success for all organizations with which you have been involved ... We congratulate you for your contributions and salute you as one of Ohio's finest citizens." Representatives Mike Stinziano and Vern Riffe, Speaker of the Ohio House of Representatives.

Resolution No. 93-12-19-E ... by the Board of Township Trustees of Hudson Township, Summit County, Ohio," ... Be it resolved by the Board ... that Bahman Ghorashi who has served this community on the Steering Committee for Architectural/Design Standards has distinguished himself in volunteer service to Hudson Township and is deserving of this expression of gratitude for such service and the many contributions made to this community as a consequence thereof."

SERVICE TO THE COMMUNITY

- Served on an Ad Hoc Committee on Industrial Design and Standards, City of Hudson Village (1995)
- Served on the Hudson Township Architectural/Design Standards Steering Committee (1993)
- Past participation in CSU Speaker's Bureau to present such topics as "Engineering Education"
- Presentations (Engineering Profession) on behalf of the Cleveland Chapter of the American Institute of Chemical Engineers. These presentations were delivered to high school students during "Career Days"
- Participation (Judge) in The Science Fair for high school students
- Presentation to high school Honor Students at the 43rd Annual Award Ceremony of The Cleveland Society of Engineers on behalf of the College of Engineering, Cleveland State University, 1989
- Presentation of scholarships to high school students at the Cleveland Technical Societies Council - 60th and 61st Annual Scholarship & Achievement Awards, May 2006 and May 16, 2007
- Arranged visits and conducted tours of the campus and Engineering College laboratories for high school students and their parents, 1990
- Represented the Ohio Aerospace Institute at the Student Affairs Committee of the Cleveland Chapter of the American Society of Materials (ASM) Young Members Night, 1990
- Advisor to a publication by Education Advisory Board: "Guiding Student Choice to Promote Persistence", Academic Affairs Forum, 2015

SAMPLE OF STRATEGIC PLANNING EXPERIENCE

- Board of Trustees' Engineering Taskforce - Worked with the CSU Board of Trustees Engineering Taskforce to identify the growth potential of the College and set benchmarks to achieve the desired objectives over a five-year period
- Development of an online education strategy for Tennessee Tech University, 2014-present
- As Dean of Engineering, started a strategic planning process in summer of 2008, with two days of retreat in August that resulted in the formation of six affinity groups who worked diligently and met regularly to construct a five-year plan. Met with group leaders (conveners) periodically and met with various constituencies with the goal of completing the final draft by April of 2009. This was a comprehensive strategic planning process that involved participation of all faculty as well as representatives from staff, students and other stakeholders. In doing so, we endeavored to align our mission with that of the University and the needs of the region in accordance to the Chancellor's Strategic Plan for Higher Education 2008-2017. The goal was to develop a shared vision and implement it.
- Strategic Planning University review (SPUR) – Dean Participant, 2008
- Constructed the Strategic Plan and Business Model for the establishment of Fenn Academy, 2005
- Participated in the CSU's University Strategic Planning Committee retreat as Engineering Dean. March 2008
- Facilitated a retreat for Chemical and Biomedical Engineering dept. to develop their strategic plan, Fall 2005
- Planning and Budget Advisory Committee member, CSU. The committee recommended planning priorities, developed budget assumptions and linked planning enrollment and budgeting
- Facilitator, CSU Planning Conference Retreat to review the progress made on the functional mission goals and objectives and to explore opportunities for growth and change at CSU, 1996
- Ohio Aerospace Institute, Strategic Planning Team, University Sub-Group, 1991-1992
- Chemical Engineering Dept., CSU, participated in Assessing How Central the ChE Program was to the Mission, Goals and Objectives of the University, 1991
- Diagnostics, Imaging and Visualization Focus Group, OAI -- to determine the mission and purpose of the group, goals and objectives and the required resources, 1991-1993
- Worked with the CSU Board of Trustees Engineering Taskforce to identify the growth potential of the College and set benchmarks to achieve the desired objectives over a five-year period
- Completion of a five-year strategic plan and its successful implementation

UNIVERSITY COMMITTEES, COUNCILS, SENATE, TASKFORCE PARTICIPATION

Participated as chair, member or representative on over 60 committees, taskforce or councils at The Ohio State University, Cleveland State University, NASA, Ohio Aerospace Institute and Tennessee Tech University.