

RAKESH K. PANGASA, Ph.D. Industrial Engineering
Emeritus Professor, Consultant, Systems Analyst, Commissioning Engineer
 Research, Teaching, Training & Consulting: Business Management & Entrepreneurship
 Plant Operations, Strategic Management, Information Systems, Engineering, Mathematics
 Statistics, Grant Writer, Productivity Improvement, Economics, Capitalism & Objectivism

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Objective:

To seek opportunities to offer guest lectures, participate in some collaborative research or productivity improvement projects, or teach online/hybrid courses

Research Interests:

- Law of Causality and Rational Thinking
- Entrepreneurship as the source of wealth-creation
- Objective business ethics
- Discovery and Application of Rational Principles

Educational Qualifications:

- Ph.D. in Industrial Engineering; (Planning and organizing industrial research) Indian Institute of Technology, Delhi 1986
- MBA Course Work as prerequisite for Ph.D. in Industrial Engineering, 1980
- Bachelor of Science in Chemical Engineering Panjab University, 1971
- Diploma in German Language Max Mueller Bhavan, 1973

Current Affiliations:

President, Productive Systems, Yuma AZ
Judge, Center for Science, Teaching & Learning, Rockville, NY
Emeritus Professor – Business, Northern Arizona University, AZ
Faculty - Information Technology and Security, Webster University, Missouri
Partner – Scale Computing, Indianapolis, IN
Consultant – Indo American Chamber of Commerce

Employment and Consulting/ part-time Affiliations:

Full-time Employment								Consulting/Part-time Assignments																																											
1972	73	74	75	76	77	78	79	1980	81	82	83	84	85	86	87	88	89	1990	91	92	93	94	95	96	97	98	99	2000	01	02	03	04	05	06	07	08	09	2010	11	12	13	14	15	16	17	18	19	2020	21	22	23
CRI: Cement Research Institute of India								AWC: Arizona Western College, Yuma AZ																																											
Nicklaus Engineering American Petroleum Institute								NAU: Northern Arizona University, Yuma, Flagstaff, Phoenix, Tucson, Prescott, AZ																																											
								ASU: Arizona State University, Tempe, AZ																																											
								ACC: Arapahoe Comm. College, CO																																											
								UA: University of Arizona, Tucson AZ																																											
								WEB: Webster University, Yuma, Aurora, Vienna, Shanghai																																											
Tanner Companies								Productive Systems																																											
								Sunset Community Health Center																																											
								Gowan Milling & Gowan Co.																																											
International Rotary Kiln Users Association								Rinker Materials																																											
								Nicklaus Engineering																																											
								365 Pronto																																											
								ENT Physician's Office																																											
								JOL Enterprise																																											
								Adelphia																																											
								Law Office Sud-Devaraj Associates																																											
								US Army Yuma Proving Ground																																											
								Yuma Regional Medical Center																																											
								Freedom Library																																											
								Harvest Preparatory Academy																																											
								Crane Elementary District & Menta Academy																																											
								Goa Business School; Banaras Hindu University; Delhi University; Punjab University																																											
								Scale Computing																																											
								NPG Broadcasting																																											

Professional Skills:

- Professional research in Moral Philosophy, Individual Rights, Rational Self-Interest, Capitalism, Objectivism, Economics.
- Teaching undergraduate and graduate level courses in business administration, strategic management, operations management, creative thinking, innovation, business research, and information systems using face-to-face, interactive television network, online, and hybrid delivery formats.

- Operations improvement studies using workflow analysis.
- Developing and implementing curriculum for online and hybrid courses.
- Promoting student learning experiences using effective and efficient course implementation strategies.
- Developing and implementing outcomes assessment review of (engineering) program.
- Developing, seeking funding, and implementing Grants in science, technology, engineering and mathematics areas.
- Developing opportunities for providing scholarships to students and managing scholarships.
- Continuously striving to incorporate newer developments in the industry into the curriculum.
- Helping students in identifying their career paths for professional development.
- Teaching and training quality engineering and project management principles.
- Computer systems analysis and
- Passion for continuous productivity improvement.

Summary of Professional Accomplishments:

Teaching, Training and Research at Educational Institutions		
Northern Arizona University	Yuma, AZ	1992-2021
<ul style="list-style-type: none"> • As Associate Faculty, taught Computer Information Systems, Production and Operations Management, Quantitative Business Analysis, and Professional Development for College of Business Administration. • As Associate Faculty taught several Business Administration and Management courses. • As Professor of Business and Director of Business Innovation Center, (2014-21) taught Business Management, Entrepreneurship, Information Systems, Strategic Management, Business Ethics, Supply Chain Management (see complete list in attached file) and organized several Startup Weekends as Organizer and Mentor. 		
Webster University	Yuma, AZ	1989-2001 & 2022-Current
<ul style="list-style-type: none"> • Taught MBA courses: Business Information Systems, Operations and Production Management, Applied Business Statistics, Business Policies and Strategies, and Analysis of Management Systems at MCAS Yuma, AZ, campus. • Taught Business Information Systems at Vienna Austria campus (summer 1992) • Taught Operations and Production Management at Aurora campus (summer 1994) and at Shanghai, China (summer 2001) • Teaching Information Technology Project Management and ITM Security Management online (2022) 		
Arizona State University	Tempe, AZ	1990s & 2014-2018
<ul style="list-style-type: none"> • Participated in workshops on Engineering education and motivating students in Engineering programs. • Developed and participated in implementing NSF-funded coordinated Engineering Program. • Developed online course curriculum in electrical engineering. • As Associate Faculty (Honors), taught ASU Experience-Electrical Engineering, Introduction to Electrical Engineering, and Calculus II for Engineers 		
University of Arizona	Tucson, AZ	2005-06 & 2014-2018
<ul style="list-style-type: none"> • As Associate Faculty taught Quality Engineering at undergraduate and graduate levels (2005-06) and participated as Engineering Judge of Interdisciplinary Engineering Design Program (2014-18) 		
Arizona Western College	Yuma, AZ	1986-2014
<ul style="list-style-type: none"> • As Associate Professor (1986-87) taught Pre-Algebra and College Algebra (1986-87). • As Professor of Mathematics, taught Precalculus, Trigonometry, Calculus I, Calculus II, and Differential Equations • As Professor of Engineering, introduced Engineering Program, and taught Fundamentals of Engineering Design; Introduction to Structured programming; Engineering Analysis; Computer-aided design; Environmental Engineering; Applied Numerical Analysis using MATLAB; Applied Mechanics Statics; Programming in FORTRAN, MATLAB, Maple, LabView, C++, C#, and Java. • Evaluated two Ph.D. Theses on "Studies in Total Quality Management", Gujarat University (2010), and "Formation and Hydration of tricalcium silicate phase", Panjab University (2001). <p>(Complete list of courses taught attached)</p>		
Arapahoe Community College, Colorado	Littleton, CO	1993
<ul style="list-style-type: none"> • Taught College Algebra and Calculus II 		
Freedom Library	Yuma, AZ	2017-20
<ul style="list-style-type: none"> • Participated as Governing Board Member • As freelance Instructor, taught Economics, Objectivism, and US Constitution 		

Research, Training and Consulting Projects		
Productive Systems	Yuma AZ	1992-Present
<ul style="list-style-type: none"> • Improved operational responsiveness, organizational efficiencies, employee productivity, and competitive advantage in over 100 organizations. Some of the specific projects successfully completed include: <ul style="list-style-type: none"> ○ Designing and developing a “Data Analyzer” for analyzing operational data in an agricultural chemical plant. ○ Creating an awareness for, and helping to improve, customer service at a broadband entertainment and communications company. ○ Re-designing the website of an electrical engineering company and improving its computer networking for improved efficiencies. ○ Designing and developing an interactive web-based tool for managing projects in an agricultural company. ○ Conceptualizing, designing and developing an interactive data base for managing project files in a civil engineering consultancy company; ○ Re-designing and developing a web-based Data Base for managing various aspects of agricultural crops ○ Designing and developing an interactive tool for assessment of infrastructural facilities at several Governmental buildings. ○ Improving operational effectiveness and efficiency on inert closed-loop jet milling operations. ○ Upgrading, configuring, and maintaining several network computer systems. ○ Designed and developed an information system for expediting orders for ready-mix-concrete. ○ Completed a project on Future Combat System Software Interoperability for US Army ○ Developed and managed an optimized model for scheduling human resources for Yuma Anesthesia Medical Services. ○ Developed online training modules for YRMCCare Physician Training Program ○ For a start-up company, conceptualized, developed, and launched an innovative business model for operations and maintenance services. ○ 		
Nicklaus Engineering Co	Yuma, AZ	1986-2017
<ul style="list-style-type: none"> • Designed and drafted civil engineering designs using AutoCAD (1986-87) • Designing and developing an interactive data base for managing project files. (2006) • Designed and developed an interactive tool for assessment of structural, architectural, electrical, mechanical, and plumbing facilities at several buildings in Yuma County. (2014-17) 		
The International Rotary Kiln Users Association (TIRKUA)	Palm Springs CA	1986
<ul style="list-style-type: none"> • Presented a workshop on Productivity Improvement in Indian Cement Industry 		
Tanner Companies,	Yuma, AZ	1987-89
<ul style="list-style-type: none"> • Designed and developed an information system for quickly transforming ready-mix-concrete enquiries into potential orders; and improved upon the concrete mix designs. 		
American Petroleum Institute	New York, NY	1987
<ul style="list-style-type: none"> • Provided computer-aided scientific and engineering abstracting information services. 		
Gowan Milling and Gowan Company	Yuma, AZ	1989-99
<ul style="list-style-type: none"> • Researched products for commercial exploitation; developed one product; and participated in productivity improvement and systems analysis studies at Gowan Company in their Production Management System. • Developing a web-based Operational Analysis Data Analyzer for a chemical manufacturing company (Gowan Milling) to help its managers improve operational responsiveness and organizational efficiencies • Developing web-based Intranet components for improving organizational responsiveness and efficiencies for an agricultural chemical company and a civil engineering company using Microsoft Visual Studio.NET and Microsoft ACCESS • Conducted a study to improve operational effectiveness and efficiency of a combustion process to generate desired inert gases at Gowan Milling 		
Sunset Community Health Center	Somerton, AZ	1995-2000
<ul style="list-style-type: none"> • Maintaining a SCO UNIX-based filing and retrieval information system at six health clinics in and around Yuma, Arizona, and replacing the system by a Windows NT-based system 		
Rinker Materials,	Yuma, AZ	2003-04
<ul style="list-style-type: none"> • Supervising research and development efforts at a ready-mix concrete company to develop a new product 		
JOL Enterprises	Yuma, AZ	2004
<ul style="list-style-type: none"> • Design and develop a network system and website for the electrical engineering company 		
Adelphia	Yuma, AZ	2004
<ul style="list-style-type: none"> • Developing and implementing a marketing plan for Adelphia Communications to improve its market share. 		
ENT Physician’s Office	Yuma, AZ	2004

<ul style="list-style-type: none"> Upgraded computer network 		
Law Office – Sud-Devaraj Associates	Yuma, AZ	2005-06
<ul style="list-style-type: none"> Upgraded, configured, and maintained computer network and business website 		
FL Schmidt	Allentown, PA	2006-07
<ul style="list-style-type: none"> Developed operations and project management training manual on <i>Wet Flue gas Desulfurization System</i> at Marshall Steam Power Station Participated in energy audit operations analysis energy audit at GCC-Dakota cement plant. Provided operations and project management training on <i>SO₃ Mitigation Dry Sorbent Injection System</i> at a few power plants of American Electric Power 		
US Army Yuma Proving Ground	Yuma, AZ	2008-09
<ul style="list-style-type: none"> As Senior Computer Systems Analyst, completed a project on Future Combat Systems Software Interoperability at Yuma Proving Ground 		
Yuma Regional Medical Center	Yuma, AZ	2010-12
<ul style="list-style-type: none"> As Systems Analyst and Industrial Engineer, developed an optimized model for scheduling human resources at Yuma Anesthesiology Medical Services and continually providing scheduling services As Systems Analyst and Industrial Engineer, designed and developed online training modules for YRMCCare Physician Training Program 		
365 Pronto	Scottsdale, AZ	2017-19
<ul style="list-style-type: none"> Designed, developed, and launched an innovative business model for operations and maintenance services for solar, electrical vehicle charging, and battery storage devices by interactively matching device owners with service technicians. The company has now become a division of Enphase Energy Inc. 		
Center for Science Teaching & Learning	Rockville, NY	2020-22
<ul style="list-style-type: none"> Judging Spellman High Voltage Electronics Clean Tech Competition for high international school students. 		