

## SITAKANTA MOHANTY, Ph.D.

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### Summary of Expertise:

- Skilled at interacting with students, faculty, administration, business clients, and subject-matter experts from diverse technical disciplines for consensus building
- 4 years of experience in working collaboratively with the Vice Presidents and Associate Vice Chancellors on planning, development, and evaluation of academic and instructional support programs
- Experienced in collaboratively working with independent school districts to develop new ECHS/DC programs and universities to create transfer pathways
- Strong organizational skills for managing faculty, staff and complex multi-disciplinary teams & projects with emphasis on collaboration, innovation, continuous improvement, and mutual respect
- Strong background in data-driven/data-informed decision making in all aspects of a division's operations
- Deeper understanding of the Quality Matters requirements obtained through certifications
- Championing embedded tutoring, co- & extra-curricular experiential learning, competency-based education (CBE), Prior Learning Assessment (PLA)
- A SACSCOC-approved external reviewer with strong working relationship with THECB to enable resolving complex curriculum issues
- Experience with Ruffalo the Noel Levitz (RNL) Strategic Enrollment Plan (SEP) development and Strategic Enrollment Management (SEM)
- 20 years of project management and 10+ year of supervisory management experience; ~200 hours of formal Project Management Professional (PMP) certification training
- Deep understanding of the diverse academic, socioeconomic, cultural, disability, and ethnic background of students, faculty, staff, and community

### Education:

- Ph.D., Engineering, University of Texas at Austin, Austin, Texas, USA (GPA: 3.7/4)
- M.S., Engineering, University of Alabama, Tuscaloosa, Alabama, USA (GPA: 3.5/4)
- B.S., Engineering, Indian Institute of Technology (ISM), India (GPA: 3.83/4)

### Experience:

#### Chair of AMTEL/Agriculture/HCA/VT Department, 6/2019 to present

- Served 6 full-time faculty, 12 adjunct faculty, and 10 Dual Credit (DC) adjunct faculty; actively managed faculty recruitment, credentialing, training, promotion, and faculty loading
- Used project management principles to manage department's activities including advanced planning, scheduling, executing, and managing/controlling operating budget, purchases, and expenses
- Actively managed technologically challenging and rapidly evolving high-wage, high-demand programs including Advanced Manufacturing Technology (AMT), Production and Process Technology, and Engineering that required incorporating new technologies (e.g., Industry 4.0) and mitigating the impacts of acute faculty shortage and low student enrollment
- Managed a large portfolio of programs, which also included Logistics and Supply Chain, Agriculture, Healthcare Administration (HCA), and Veterinary Technology (VT)
- Developed new ECHS/DC programs at SAISD, SSISD, and SwISD high schools with a focus on AMT, agriculture, engineering, process technology, and welding technology (future).

- Led program planning, evaluation, and program improvement plans through meeting with faculty to identify program goals, needs, collaborate with stakeholders to plan/execute improvement plans to improve key performance metrics (KPIs) to include course enrollments, declared majors, retention, persistence, graduations, and job placement
- Developed ECHS/DC MOU templates in coordination with the district support office (DSO) that is used by all sister colleges
- Actively engaged faculty through training and practice in instructional design, delivery, assessment, and classroom management; engaged faculty in increasing student attainment of industry-sought competencies through e-Portfolio, digital badges, and marketable skills
- Served on the advisory board of the Teaching & Learning Center (TLC); Collaborated with TLC and DSO for mandatory/optional training of all faculty (e.g., AOCD training, AFCT) for the highest level of course delivery in online, hybrid, and face-to-face modes
- Certified in (i) professional-skills and (ii) Quality Matters (QM) APPQMR digital badge development
- Actively developing Prior Learning Assessment (PLA) and competency-based education (CBE) to address adult learner retention issues
- Coordinated embedded tutoring, advocacy services, DSS services, and experiential learning assistance in classrooms
- Obtained Perkins grants and used department funds to reduce/eliminate long-standing deficiencies in the labs by purchasing must-have lab equipment for hands-on courses
- Developed internship opportunities for students for improved retention, persistence, and job placement— sent 4 students to TAMUK for internship in one summer
- Ensured availability of LISTO, STEM, IMPACTO grant funding for faculty training to improve performance of special student populations

#### Teaching:

- *Palo Alto College (PAC):* Departments of Mathematics and Engineering, Associate/Assistant Professor and Adjunct Faculty; Courses taught face to face, hybrid, and/or remote: ENGR 1201 Introduction to Engineering, ENGR 2301 Engineering Mechanics I – Statics, MATH 0410 Developmental Mathematics
- *San Antonio College (SAC):* Departments of Mathematics and Engineering, Adjunct Faculty; Courses taught face to face, hybrid, and/or remote: ENGR 1201 Introduction to Engineering
- *St. Phillips College (SPC):* Departments of Mathematics and Engineering, Adjunct Faculty; Courses taught face to face, hybrid, and/or remote: MATH 0410 Developmental Mathematics, MATH 1442 Statistics
- *University of Texas at Austin:* Departments of Petroleum and Geosciences, Graduate Teaching Assistant Courses taught face to face to undergraduate and graduate students: Drilling Fluids
- *University of Alabama at Tuscaloosa:* Departments of Mineral Engineering, Graduate Teaching Assistant Courses taught face to face to undergraduate and graduate students: Drilling Fluids, Petrophysics
- *U.S. Nuclear Regulatory Commission (USNRC), Washington, DC:* Short courses taught: Uncertainty and Sensitivity Analyses, Nuclear Power Plant Ultimate Heat Sink Analysis

#### Program Lead – Engineering, Industrial Technology, and Energy Technology (Interim)

- Led program planning, evaluation, and program improvement plans for better student retention
- Worked closely with Student Advising to initiate preparation for student graduation
- Worked closely with the Enrollment team and Marketing/Communication to improve student enrollment
- Actively reached out to industry for recruiting Advisory Committee members for Industrial Technology
- Modernized curriculum, closed programs lacking enrollment, created new/futuristic programs, for greater enrollment, retention, and employability.

#### Strategic Enrollment Planning

- Led college-level effort on developing the Ruffalo the Noel Levitz (RNL) Strategic Enrollment Plan (SEP) and Strategic Enrollment Management (SEM) for adult learners
- Independently developed predictive model to project student enrollment, faculty needs, and staff needs until 2030. Presented research findings at the Texas Association of College Technical Education (TACTE) Conference
- Worked with the District Support Office (DSO) to develop Perkins' CLNA
- Developed a deeper understanding of work force education funding mechanisms, factors affecting enrollment such as demography, competition, market opportunity, public policy, data pipeline, and labor market
- Brought an ROI and data-driven-decision culture to starting and closing programs, curricular reforms, recruitment storytelling, and crisis management
- Used the latest research and high-impact practices to create models for student retention at the department and division levels
- Participated in the RNL Strategic Enrollment Management (SEM) Institute

#### Project Management:

- Project manager and principal investigator of numerous small (\$30K/yr) and large (\$5MM/yr) projects over a span of 20+ years
  - Communication/Coordination – was responsible for communication and status reporting to project staff, customer, and other stakeholders
  - Fiscal – tracked project expenditures and work progress; maintained full financial accountability to projects; forecasted financial trends across projects
  - Customer Service – consistently provided responsive, concise, and professional support to all customers and other personnel and ensured timely follow-up on all customer concerns and issues. Resulted in the R&D division receiving high grades for the clients.
  - Consistently and successfully aligned the team goals with the strategic direction from senior administration
- ~200 hours of boot camp training on Project Management Institute's (PMI) methodology and 20+ years of practical project management experience with direct and indirect application of key project management knowledge areas

#### Functional Management (Assistant Director/ Manager) at Southwest Research Institute (SwRI):

- 7 years of experience in managing 7 to 30 staff members as an R&D Manager and Assistant Director
- Managed up to 30 engineers and scientists (all Ph.D.'s and MS from multiple disciplines), provided overall direction for technical service and research assistance to clients in three functional engineering groups toward making a world-class federally funded research and development center
- As a part of the senior management group, was responsible for operational and strategic planning, performance optimization, profitability improvement, new business development, consensus building & teaming, joint ventures & alliance formation, annual budgeting & finance, crisis management, multi-site operations, decision-making
- Controlled budgets and schedules, assured quality of work products, and assured availability and efficient utilization of qualified manpower
- As a functional manager, successfully implemented system-level technical knowledge in informing the strategic direction set by the senior management.

#### Cost Estimation:

- Project manager of and a technical contributor to an independent cost estimation project prompted by a review by the US Government Accountability Office (GAO) of the cost estimation practices. Responsible for conducting the independent cost analysis so existing results could be verified for accuracy and realism.

- Principal investigator of a cost analysis project for nuclear fuel cycle analysis for the United States' nuclear regulatory agency. Analysis model and its results were used to inform development of updates to the nuclear-fuel-cycle regulations of the US.

#### Statistical Analyses:

- Interpreted qualitative data, carried out quantitative research, applied various sampling concepts (e.g., target population, sample representativeness, potential consequences of unrepresentative sampling, sampling-design effect; sampling methods such as simple random, stratified, etc.), identified dependent and independent variables, confidence levels, summarized and described collections of data, univariate and bivariate analysis, identified randomness and uncertainty in data, conducted inferential statistics (e.g., drawing inference from data, describing modeling assumptions, identifying patterns, conducting regression analysis, T-test, ANOVA test, correlations, Chi-square tests, etc.); wrote reports on quantitative findings, and critically critiqued research reports.

#### Systems Engineering:

- A system thinker and a system-level modeler; developed new models, and also adapted existing models and procedures to create possible alternative solutions to highly complex problems, especially where the uncertainty was too high;
- Specified, developed, implemented, and integrated technical components into system models; chief architect of the system model for over a decade; 15 years of experience in putting together and working with large multidisciplinary software projects (i.e., ~30-member) for developing, testing, delivery, and rollout of solutions
- As the principal investigator, helped drive and develop innovative solutions, fostered and maintained client relationships by providing status updates, lead meetings, and creating/ maintaining plans.

#### Quality Assurance and Quality Control:

- ~20 years of experience in developing and implementing quality assurance (QA) requirements
- Maintained full accountability to project quality by using surveillance, audit, customer feedback, etc. tools to meet required quality standards and project expectations; focused on correctness (i.e., use of appropriate techniques and data pedigree, calculations are done correctly, conclusions supported by correct interpretation of data, etc.), adequacy (of model and data), consistency, and completeness.

#### **Certificates of Achievement:**

- Project Management Professional (PMP) Certification Training (~200 hours)
- Innovation and Entrepreneurship Boot Camp –IC<sup>2</sup> Institute, U. Texas at Austin
- Project Management – Southwest Research Institute (2.1 CEU)
- Supervisory Management
- Successful Cost Estimating Methods
- Integrity Selling-Integrity Solution
- Probabilistic Risk Assessment (PRA) for Technical Managers
- Technical Specialist Audit Observation Training (U.S. Nuclear Regulatory Commission, Washington, DC)
- Regulatory Training (U.S. Nuclear Regulatory Commission, Washington, DC)
- Probabilistic Risk Analysis: Assessment, Management, and Communication
- Overview of Hazard Identification Methods
- Hazard Evaluation: Qualitative and Quantitative Analysis Methods
- Fire Probabilistic Risk Assessment (PRA) – Principles
- <https://www.alamo.edu/pac/news-events/news/2020/february/spotlight-series-dr.-sitakanta-mohanty/>

#### **Positions Held:**

- Alamo Colleges, San Antonio, Texas, 2017-Present
  - Academic Chair, Palo Alto College, San Antonio, Texas; 2019-present
  - Adjunct faculty, St. Phillips College and San Antonio College

-Assistant Professor of Engineering and Adjunct Faculty of Mathematics, Palo Alto College Southwest Research Institute (SwRI), San Antonio, Texas; 1992-2016  
 -Institute Engineer, 2010-2016 (*Highest level engineer*)  
 -Assistant Director R&D, 2005-2010  
 -Manager R&D, 2004-2005  
 -Principal Scientist, 1999–2004  
 -Senior Research Scientist, 1994–1999  
 -Research Scientist, 1992–1994  
 ARCO Oil and Gas Company, Plano, Texas; 1991  
 -Research Engineer

**Professional Registrations, Affiliations, and Activities:**

Conference Chair	International High-Level Radioactive Waste Management Conference (2011)
Conference Program Advisory Committee Member	Waste Management Symposia, Inc. and various committees of the American Nuclear Society (Since 1999)
Lead Organizer	Integrated Systems section of the 10 <sup>th</sup> IHLRWM Conference (2003)
Prestigious Award Committee Member	Society of Mining Engineers’ Jackling Award
Technical Conference Coordinator	Probabilistic Safety Assessment and Management (PSAM) Conferences (Waste Management— 2004, 2011)
Peer Reviewer for Prestigious Journals	Risk Analysis International Journal Reliability Engineering and System Safety AIAA Journal Nuclear Technology Journal of Contaminant Hydrology Physics Letters—Journal of Physics (Applied Physics) Developments in Geotechnical Engineering
Membership	CAEL - current Texas Association of College Technical Education (TACTE) - current Society of Manufacturing Engineers (SME) ) - current American Nuclear Society (ANS) - current Society of Risk Analysis (SRA) - past Society of Petroleum Engineers (SPE) – past American Geophysical Union (AGU) - past

**Volunteering and Awards:**

Excellence in Administration	National Institute for Staff and Organizational Development (NISOD) (2022)
Board of Trustees Member (past)	Mind Science Foundation
Corazon Award	Alamo Colleges
Outstanding Contribution Award	American Nuclear Society (2003)
Expert Reviewer (current)	U.S. Department of Energy (DOE) Technology Commercialization Funding Reviewer
Expert Reviewer (current)	U.S. Department of Energy (DOE) Nuclear Energy University Funding Reviewer
Agency Reviewer	United Way Stewardship Review Committee
Past President	Sigma XI Student Chapter, Tuscaloosa, Alabama
Past Vice-Chairman	Graduate Engineering Council, U. Texas at Austin
Past President	India Asia Association
Volunteer Committee Member	SA2020: Vision for the future of San Antonio

### Computer Skills

Software	Total-System Performance Assessment Code, MASTER, GSLIB, PORFLOW
Language	COMSOL, GoldSim, Matlab, Mathematica, Unix, C++, Java, S plus, FORTRAN, Pascal, Basic, Excel, PowerPoint, Word
System	Windows 7, NT 4.0, Macintosh Operating System, SUN OS, Solaris, VAX/VMS
Hardware	IBM PC, Macintosh, CRAY/YMP, VAX 8800, UNIVAC 2200, CDC, Dual Cyber170/150, Fluke Data Acquisition System, Apollo workstations

### PUBLICATIONS:

#### Most Recent:

Mohanty, S. "Adult Learners Enrollment and Retention in the Era of Early College High School (ECHS) and Dual Credit" Annual CAEL Conference, San Diego, California, November 17 – 19, 2021.

Mohanty, S., J. Hernandez, J. Scheidt, G. Becerra. "Adult Learners - Let a Dwindling Population Not Be a Forgotten Population," Leadership Track, Texas Association of College Technical Education (TACTE) Conference, April 7-8, 2021.

**~150 other peer-reviewed papers, conference proceeding papers, conference/workshop presentation.**