

JOHN A. McENERY

EDUCATION:

CLEMSON UNIVERSITY

Doctorate of Science in Civil Engineering, 2000

UNIVERSITY OF MISSOURI - ROLLA

Master of Science in Civil Engineering, 1993

UNIVERSITY OF MISSOURI - ROLLA

Bachelor of Science in Civil Engineering, 1986

PROFESSIONAL REGISTRATION:

Licensed Professional Engineer,

- State of Missouri # 024644, *April 1992*
- State of South Carolina # 15497, *July 1993*
- State of Mississippi # 11783, *July 1993*

Certified Floodplain Manager,

- State of Texas # 1298-07N, *January 2008*

PROFESSIONAL ABSTRACT:

The focus of my research is water resources. This is manifested in three key areas: hydrology, hydraulics and surface water quality. Within this field I have authored or co-P.I.'ed grant proposals procuring more than \$1.6M in research funds. I am immensely grateful to be able to devote my career toward the advancement of this field and toward building a recognized program in water resources at the University of Texas at Arlington.

As a new faculty member, having to build a water resources program at UTA has not been easy. Upon arrival, I inherited a program with absolutely no active Doctoral or Thesis research and a minimal research history. During my first three years there were no admissible Doctoral applicants. There were no Master of Science students in the graduate program either. With no departmental colleagues in the water resources area, (particularly none at the Full or Associate levels with whom partnerships for research could begin) I had to meet this challenge single-handedly. I have been successful in recruiting and as of this summer have three Doctoral students and several at the Masters level. These students are now working on funded research projects and we are now able to reliably populate multiple courses in our graduate curriculum every semester.

I've worked to build this program while also handling numerous unanticipated administrative challenges. My responsibilities have included a large number of duties as an area leader. This has included curricular responsibilities such as an enormous amount of outreach to the professional community to recruit the adjunct instructors needed to keep our graduate level courses running, letters for their hire, supporting the adjunct instructors in their teaching with needs for course development, texts, and even notes and syllabi. I've had to manage course scheduling for our water courses, and to advise and coordinate registration for the remaining non-Thesis M.E. students so that enough classes could populate to keep graduate courses running. I've revised the outdated undergraduate and graduate curricula in water resources, and written the water resources components of the undergraduate area of concentration track and the new Fast-Track BS-MS program. I have had to offer extra sections for undergraduate students so that their graduation goals would not be hindered, and provided interaction with the undergraduate advisors to resolve planning questions for their undergraduate advisees.

I have worked to assess the deficiencies of the laboratory facilities, drafting white papers and budget estimates for establishing a research level laboratory and meeting with Advisory Council members to look for options to generate a functional research lab. This includes

responding to numerous Departmental and College requests with space allocation needs information while seeking adequate teaching and research facilities.

Throughout my first three years I also participated in a lengthy faculty search. I am now grateful to have a new colleague at the Associate Professor level that has joined me this year and with whom I can partner on research activity. Together we build a solid foundation for the pursuit of science in water resources.

A great amount of my activity over my first four years has focused upon networking locally, statewide and nationally; to let collaborators know that a program was being developed and to seek opportunities. This has resulted in a new level of interaction with many organizations and in funding for the research that I am currently conducting.

There are a wide range of problems, crucial to our population, which require deeper understanding of water resources science. These include climatic impacts upon water availability, drought, flood warning/mitigation, sustainability of the aquatic environment, and the physical behavior of our infrastructure. The primary driver for the hydrologic component mentioned above is precipitation. The lack of robust access to precipitation data has been an obstacle to work in this field. Therefore, I began by partnering with the U.S. National Weather Service (NWS) located in Fort Worth at the West Gulf River Forecast Center (WGRFC). The project has established a hydrologic information server at UTA designed as a gateway data system to ingest, store, and disseminate NWS daily and hourly precipitation data. Funding was awarded by the University Corporation for Atmospheric Research, which is an organization supported by the National Science Foundation. The system provides operational daily time series as WaterML services for Nexrad Multi-Sensor Precipitation Estimates (MPE) that can deliver the entire time history of daily MPE precipitation. Efforts continue to broaden the scale of this service in space and time. This data exchange system is a very significant benefit to hydrology. The MPE rainfall data provides the full history of precipitation uniformly distributed over multiple states and part of Mexico. Hydrologists around the world can now access Nexrad data as time series information. Agreement has been arranged for this UTA system to serve as the connection linking NWS data with the Texas Water Development Board's Texas Natural Resources Information System.

The long term benefits of this are immeasurable, making MPE rainfall data much more valuable and useful as an information product for water science and management. Plans are developing to use this system for hydrologic data sharing across multiple government agencies with a primary goal of supporting water management decisions. The NWS is also advocating that this pilot project become a test bed for the Integrated Water Resources Science and Services (IWRSS) initiative. IWRSS is a multi-year multi-agency federal initiative to streamline the accessibility and integration of hydrologic data and forecasts among government agencies for both private and public interests. Ultimately, this increased access to and standardization of data will enable the hydrologic community to develop new applications, products, and services for stakeholders, which supports the primary focus of the IWRSS initiative. Additionally, the NWS with the Office of Hydrologic Development (OHD) at the NWS National Headquarters and the adjacent two River Forecast Centers have agreed to bring their information into our system. The data stream is now connected to UTA and is currently being configured. This expands coverage to encompass northward into the Midwest and eastward along the Gulf Coast reaching Virginia and the Carolinas. Presentation of results has been accepted at conferences of the American Geophysical Union, American Meteorological Society, the Texas Flood Plain Managers Association and the National Hydrologic Warning Council.

The goal for extending my work with the National Weather Service is to build an exchange system that can serve as a recognized North Texas Hydrologic System. The system will host an inter-agency suite of information and services linking a multitude of organizations for the support of local, regional, and nationally important of Water Resource needs. The City of Arlington is partnering with UTA to use the system as the data management center for its ALERT warning system. Other interested discussion has also

progressed with the U.S. Army Corps of Engineers, Region 6 U.S. EPA, North Central Texas Council of Governments, the City of Dallas, the City of Fort Worth and the U.S. Geological Survey.

During this current year I have been awarded as Principal Investigator a two year project partnering the University of Texas at Arlington (UTA) and the Tarrant Regional Water District (TRWD). This new project will build upon the relational processes that have already been established through the UTA/NWS work. The project is developing a computer system for collection, structured storage and transfer of hydrologic data needed by the Tarrant Regional Water District to support the Fort Worth Floodway Rainfall-Runoff Model (FWFRRM). Through this the project, new mainframe computing equipment for the North Texas Hydrologic System is being maintained at Arlington Regional Data Center, a tier III data facility and part of the regents UT-system.

During this current year I am also Co-PI among a team of researchers awarded a project by the National Science Foundation to examine Water and Ecosystem Sustainability in an Effluent-Driven Urbanizing Watershed. This research project will partner the University of Texas at Arlington (UTA) and the University of North Texas (UNT) in an effort to develop a multidisciplinary collaborative integrating biological, physical and social sciences to advance water and ecosystem sustainability in the face of climate change and rapid urbanization. This new project will again use the hydrologic information system for NWS precipitation data that I have already established through the UTA/NWS work.

As a Certified Floodplain Manager, I am very aware of the flood hazards in our environment and those impacts upon our society. Within the past season, Tropical Storm Herimine provided a stark example of those impacts upon Arlington, Texas. The State of Texas is highest in the Nation in terms of annual flood fatalities. The integration of hydrologic information into an operable network for flood modeling and warning is crucial for reducing these fatalities. An additional extension of the work that I'm doing with the NWS WGRFC is for situational awareness and hazard response. I am working with a research team from the GIS company, ESRI, to generate map features products. These are dynamic map displays which can draw a time interval of recent observations from our UTA/NWS data system to produce current hazard maps. These can be embedded in web pages for public advisory. Our ultimate goal is to deliver these through web enabled mobile phones.

During this summer I have also been awarded as the PI for a new \$100K project from the Texas Water Development Board to research bar migration on the Brazos River. Development of future water supply reservoirs requires knowledge of the stability of river alignments. This project combines detailed Lidar based topographic information, finite element methods for hydraulic modeling and field investigation of river morphology to develop new methodology for analyzing river and bar migration.

I am currently working with my graduate students on several other research projects. One of these is a partnership between UTA and two branches of the U.S. Army Corps of Engineers (USACE). We are evaluating the performance of a new computer program from the USACE Hydrologic Engineering Center (HEC). This program is for modeling both the hydrologic response and the soil erosion/transport (sedimentation) from a watershed. Sedimentation has a significant impact on our ability to meet water needs. As sedimentation gradually fills a man-made reservoir or lake, the capacity for storage of water for flood protection and water supply are diminished until there is no remaining capacity. Management of these crucial reservoirs depends upon reliable forecast of this phenomenon. We have partnered with the USACE Fort Worth District for a pilot study using the new HEC model for analysis of a Federal reservoir in the Dallas / Fort Worth metroplex.

I am also working with a graduate student to develop software tools that can function as extensions of the current browser that accesses the Hydrologic Information System. A broad tool set of plug-in computational routines will enable users to take greater and more efficient advantage of the information stream that is being developed.

While at the NOAA National Weather Service Office of Hydrologic Development (OHD), I focused on enhancements to the FLDWAV program for unsteady flow modeling of our nation's waterways. I was responsible for investigating the linkage the unsteady flow model with a transport model for modeling continuous transport scenarios. The service with which I participated is summarized in the article NOAA's Advanced Hydrologic Prediction Service: Building Pathways for Better Science in Water Forecasting, McEnery et al., published in the Bulletin of the American Meteorological Society, March, 2005. The NWS River Forecast Centers are currently transitioning to a new river hydraulics model known as HEC-RAS. Having expertise with both of these programs and the operational background, I'm uniquely able to support the RFC transition. Discussions with OHD to formalize such a partnership are underway.

I look forward to using my research experience, graduate academic preparation and early consulting experience to solve new engineering problems specializing in hydraulics, hydrology and water resources. Of these interrelated themes, my favorite interest is applied fluid mechanics and the hydraulic performance of water systems, using either numerical or physical modeling approaches. I believe the future of hydraulic research will consist of a blend between computational solutions and investigation through physical testing. Combining these approaches optimizes our ability to synthesize findings into descriptive algorithms. Although our profession has achieved significant progress in the refinement of numerical models, physical modeling approaches still present unique capabilities, especially when used in conjunction with numerical methods. Physical testing can be used to study a wide range of topics such as sedimentation and fluvial processes, environmental hydraulics, stream mixing and performance of hydraulic and transportation structures. Further, I hope to study the linkage of groundwater and surface water, and the numerical models for analyzing the water and solute exchange between these two domains. The state of our science in this area is very limited.

Our nation faces critical and varied water resource needs. Preservation of the streams, lakes, aquifers and estuaries serving its residential and industrial community is essential. The study of these dynamic systems is important to me. I hope to continue my effort to learn more about this subject, while collaborating with students and colleagues who share these interests.

SELECTED PROFESSIONAL EXPERIENCE:

Department of Civil Engineering, University of Texas at Arlington, Arlington, Texas.

Assistant Professor; 2007 - Present

As a tenure-track faculty member within the Department of Civil Engineering, I conduct research and teaching graduate and undergraduate courses, principally in the area of hydrology and hydraulics. Research topics include urban stormwater drainage, physical and numerical modeling, floodplain analysis, sediment and debris flow, and water resources. I have developed a new undergraduate and graduate curriculum in Water Resources, pursued publication, grant writing and conducted graduate research. I have served as the Program Director for Water Resources and as a member of the Graduate Curriculum Committee, the Dept. Laboratory Committee, and Faculty Search Committees. I am supervisor for the Fluid Mechanics Laboratory, and participate in advising graduate students in the Water Resources area.

Department of Civil & Environmental Engineering, Texas Tech University, Lubbock, Texas.

Assistant Professor; 2003 – 2007

Responsibilities included teaching 8 different graduate and undergraduate water resources courses and conducting graduate research with 2 Master's degree students. Additionally, I served on College and Department committees, supervised the Fluid Mechanics Laboratory,

participated in student registration advising and was faculty advisor for the student chapter of the Chi Epsilon Honor Society.

National Oceanic and Atmospheric Administration, Hydrologic Research Laboratory, Washington, D.C.

Visiting Scientist; 2001 - 2003

Served as a research scientist with the River Mechanics group of the Hydrologic Research Laboratory. My research included the modeling and calibration of dynamic flows on the Wabash River using the FLDWAV program. Participated in NWS research to develop and evaluate enhancements to the FLDWAV unsteady river flow model. I also investigated the linkage of a pollutant transport routine with the FLDWAV model, in order to provide contaminant forecast and warning capabilities to the National Weather Service River Forecast System (NWSRFS)

Central Connecticut State University, Hartford, Connecticut.

Assistant Professor 1999 - 2001

Principal responsibility was the instruction of undergraduate technology courses in the CCSU, Department of Engineering Technology. Responsible for developing and teaching new course in hydrology and hydraulics. Served on academic committees and as a student advisor.

Design South Professionals, Inc., Anderson, South Carolina.

Civil Engineer 1997 - 1998

During my doctoral studies at Clemson, I worked with the consulting firm of Design South Professionals, Inc. Responsibilities included the design of various site development, waste water, and water distribution projects involving the practice of both applied hydraulics and urban hydrology. My work consisted of both design and project management level responsibilities.

The City of Creve Coeur, St. Louis County, Missouri.

Civil Engineer 1989 - 1991

Planned and administered municipal drainage projects for the storm water division of the public works department. The majority of projects involved stream and channel improvements. Duties consisted of field investigation, surveying, analysis of hydrologic conditions on a site-by-site and regional basis, hydraulic design, preparation of documents, and coordination with regional authorities.

Casco Corporation, Inc., St. Louis, Missouri.

Civil Engineer 1987 - 1989

Responsibilities included all phases of civil engineering for commercial site development. Project locations were distributed nationally. Work included site planning, contour grading, drainage analysis, storm sewer design, detention rating, structural design of retaining walls and culverts, preparation of drawings, and regulatory review.

DISSERTATION AND THESIS:

Interstitial Pore Water Flux through Streambeds of Varying Composition.

Doctoral Dissertation, Clemson University (August 12, 2000)

Comparative Evaluation of Regionalized Stormwater Detention Using HEC-1.

Master of Science Thesis, University of Missouri - Rolla (December 10, 1993)

PEER-REVIEWED PUBLICATIONS:

Jitkajornwanich, K., Elmasri, R., Chengkai, L., McEnery, J. *Formalization of 2-D Spatial Ontology and OWL/Protégé Realization.* Proceedings of the 2011 ACM International Conference on Management of Data (SIGMOD 2011), Athens, Greece, June, 2011.

- McEnery, J. *Muskingum Optimization used for Evaluation of Regionalized Stormwater Detention*. Journal of Flood Risk Management, Accepted, 2011.
- Gregory, J., and McEnery, J., *Process-Based Friction Factor for Pipe Flow*. Journal of the American Society of Agricultural Engineers. In Review.
- McEnery, J. *North Texas Hydrologic Information System*. Environmental Modelling and Software. In Review.
- Shultz, M., Crosby, E., McEnery, J. *Kinematic Wave Routing for Distributed Modeling*. Journal of the American Water Resources Association. In Review .
- McEnery, J. *Flux of a Conserved Solute from Streambed Sediments of Varying Composition*. Environmental Fluid Mechanics, In Review.
- Gregory, J., McEnery, J., Fedler, C. *Simple, Robust, Process-Based Particulate Concentration Model*. Journal of Environmental Quality, In Review.
- McEnery, J., Ingram, J., Adams, T., Anderson, L., and Duan, Q. *NOAA's Advanced Hydrologic Prediction Service: Building Pathways for Better Science in Water Forecasting*. Bulletin of the American Meteorological Society, March, 2005.

RESEARCH REPORTS:

- Rainwater, K., et al., Report of Findings to Texas Commission on Environmental Quality: Evaluation of Mobile Dual Phase Extraction Applications at Sites in Texas. Water Resources Center, Texas Tech University, September 1, 2005.
- Work, P., Moore, P., and McEnery, J. *Assessment of the Effect of Bioturbation on Advective Contaminant Exchange at the Sediment-Stream Interface*. Final Report to South Carolina Water Resources Research Institute, November 15, 1999.

CONFERENCE PROCEEDINGS:

- Shultz, M., McEnery, J. and Crosby, E. *Kinematic Wave Technique Applied to Hydrologic Distributed Modeling Using Stationary Storm Events*. ASCE, Texas Regional Conference. October 3, 2008. EWRI, pp. 1-12.
- Gregory, J., McEnery, J., and Fedler, C. *Predicting Dust Concentrations Downwind from Eroding Sites*. 2006 Workshop on Agricultural Air Quality: State of the Science. Potomac, Maryland. June 5-8, 2006. pp.643-646.

CONFERENCE PRESENTATIONS:

- Invited Speaker: Implementation of HIS for U.S. National Weather Service;* Texas Flood Management Conference: University of Texas, Austin, TX. Oct. 8, 2010.
- Invited Speaker: Hydrologic Information System for Dallas/Fort Worth*. McEnery, J. Texas Floodplain Managers Quarterly Section Meeting: UTA, Arlington, Texas. Sept. 2, 2010
- Flux of a conserved contaminant between stream beds of varying composition and overlying stream flow*. McEnery, J. Water Across Interfaces: CUAHESI's Biennial Science Meeting, Boulder, CO July 19, 2010
- Invited Speaker: Regional Hydrologic Information System for North Texas*. McEnery, J. Tarrant Regional Water District Interagency Quarterly Roundtable Seminar. Fort Worth, TX. March 31, 2010
- Muskingum Optimization for Analysis of Regionalized Stormwater Detention*; AWRA 2009 Annual Water Resources Conference, Seattle, WA, Nov. 9-12, 2009.
- Application of Distributed Hydrologic Modeling*; ASCE Texas Region Conference 2008, Dallas, TX, October 2008.
- Predicting Dust Concentrations Downwind from Eroding Sites*. 2006 Workshop on Agricultural Air Quality: State of the Science. Potomac, Maryland. June, 2006.
- Comparison of Methods to Estimate Hydrologic Response of TX Watersheds*. 2005 AWRA Annual Conference, Seattle, WA. November 9, 2005.
- Lessons in Regulation of Groundwater Rights*. 2005 AWRA Annual Conference, Seattle, WA. November 7, 2005.

Applications of Groundwater Rights in the State of Texas. 2004 Conference on High Plains Groundwater Resources: Challenges and Opportunities. Lubbock, TX. December 7-9, 2004.

Contaminant Exchange Mechanisms at the Sediment-Stream Interface. 2002 AWRA Summer Specialty Conference for Ground Water / Surface Water Interaction. Keystone, CO. July 2, 2002.

Contaminant Flux through Riverine Sediments South Carolina Water and Environment Symposium. Columbia, SC. April 6, 1999.

SUBMITTED RESEARCH PROPOSALS:

Brazos River Channel Study; Geomorphic and Hydraulic Model of Sedimentation Patterns downstream of Allens Creek. (2011)

Sponsor: Texas Water Development Board: Awarded \$99,764.

Hydrologic Information System for Tarrant Regional Water District. (2010)

Sponsor: Tarrant Regional Water District: Awarded \$118,398.

Integrated Biophysical-Social Research for Water and Ecosystem Sustainability in an Effluent-Driven Urbanizing Watershed. (2010)

Sponsor: National Science Foundation: Awarded \$149,998

Adaptation of Regional Water Resources Management Strategies in Response to Climate Change. (2010)

Sponsor: United States Army Corps of Engineers, Institute of Water Resources

Watershed Protection for Texas Reservoirs: Addressing Sedimentation and Water Quality Risks. (2010)

Sponsor: Texas Water Development Board

Hydrologic Data Server for NWS - West Gulf RFC. (2009)

Sponsor: University Corporation for Atmospheric Research: Awarded \$10,980

Hydraulic Performance of Staggered-Barrel Culverts for Stream Crossings (2009)

Sponsor: Texas Department of Transportation

NSF – RET Program. (2008)

Sponsor: National Science Foundation: Awarded \$501,551

Hydraulic Performance Evaluation of Horizontal Inlet Type H. (2006)

Sponsor: Texas Department of Transportation: Awarded \$494,611

Developing a Statewide, Integrated GIS/GPS Data Model. (2006)

Sponsor: Texas Department of Transportation

Evaluation of Mobile Dual Phase Extraction Applications at Sites in Texas. (2005)

Sponsor: Texas Commission on Environmental Quality: Awarded \$93,670

Measurement of Uranium Sorption in Blackwater Draw Formation Soils. (2005)

Sponsor: DOE/BWXT Pantex, LLC. : Awarded \$70,000

Hydraulic Performance of Bridge Rails and Traffic Barriers. (2005)

Sponsor: Texas Department of Transportation

Simplified Method for Estimating Scour. (2005)

Sponsor: Texas Department of Transportation

Application of Native Vegetative Playa Buffers to Resolve Agricultural Degradation of Water Quality in the Ogallala Aquifer. (2004)

Sponsor: US Department of Agriculture; CREES

Assessment of the Effect of Bioturbation on Advective Contaminant Exchange at the Sediment-Stream Interface, Years 2 and 3. (1996)

Sponsor: Water Resources Research Institute Funding: Awarded \$92,239

Determination of Exchange Mechanisms for Interstitial Porewater Flux over Stream Beds of Varying Composition. (1995)

Sponsor: Water Resources Research Institute: Awarded \$27,010

Investigation of Salinity Effects upon Porewater Exchange Mechanisms at the Sediment-Water Interface. (1995)

Sponsor: South Carolina Sea Grant Consortium Funding: Awarded \$5,000

UNIVERSITY COURSES TAUGHT:

University of Texas; *Fall 2007-Present*

CE 3305 Mechanics of Fluids
CE 3309 Hydrology
CE 4328 Water Systems Design
CE 5352 Water Resources Infrastructure
CE 5346 Open Channel Hydraulics

Texas Tech University; *Fall 2003-Summer 2007*

• Graduate	• Undergraduate
CE 5360 Open Channel Hydraulics	CE 3305 Mechanics of Fluids
CE 5361 Advanced Hydrology	CE 3372 Hydraulic Design
CE 5362 Surface Water Modeling	
CE 5365 Storm Water Management	
CE 5366 Water Resources Management	
CE 5368 Surface Water Quality Modeling	

Central Connecticut State University; *Fall 1999 - Spring 2001*

ET 475 Hydrology and Storm Drainage
ET 251 Engineering Mechanics I (Statics)
ET 451 Soil Mechanics
ET 498 Senior Design Course
TC 122 Engineering Graphics

Clemson University; *1993 - 1995*

CE 342 Fluid Mechanics Laboratory

University of Missouri – Rolla; *1991, 1992*

CE 230 Fluid Mechanics Laboratory

OTHER PROFESSIONAL TEACHING ACTIVITIES, INCLUDING SPECIAL TEACHING PROJECTS:

UTA Enterprise Division - PDA P.E. & F.E. Review Classes for TxDOT, 2010.
UTA Dept. of Civil Engineering Professional Engineering Review Classes, 2009.
UTA College of Engineering F.E. Review Classes, 2008, 2009 and 2010.

PROFESSIONAL DEVELOPMENT:

American Society of Engineering Educators, NETI Teaching Workshop, Austin, Texas, June, 2009.

TxHIS Workshop, Texas Water Development Board, May, 2009

Certification Workshop for Floodplain Management, Arlington, TX, December, 2007.

COMPUTER SKILLS:

I have experience using several engineering programs, including HEC-RAS, HEC-HMS, HEC-1, HEC-2, HEC-6, HY-8, FLDWAV, ILLUDAS, TR-55, TR-20, WinStorm, SWMM, EPANET, Sedimot, AutoCAD, AutoDesk Land Development, Modflow, Surfer, MATLAB 6.1 and FORTRAN. I have attended training courses for ESRI ArcGIS, the Groundwater Vistas modeling package and AutoDesk Land Development.

PROFESSIONAL SERVICE:

Journal peer reviewer: Water, Air and Soil Pollution
Journal peer reviewer: Journal of Hydrology
Text Book peer reviewer: John Wiley & Sons, Inc.
Proposal peer reviewer: National Competitive Grants Program for the U.S.
Geological Survey, NIWR.
Journal peer reviewer: Elsevier, Journal of Computers and Geosciences
Proposal peer reviewer: Regional Competitive Grants Program
of the New York Sea Grant.

PROFESSIONAL AFFILIATIONS & COMMITTEES:

NCTCOG iSWM Committee
NCTCOG Flood Management Task Force
Consortium of Universities for Advancement of Hydrologic Science
National Hydrologic Warning Council Hydrologic Modeling Committee
Texas Water Development Board HIS Committee
Texas Floodplain Management Association
American Society of Engineering Educators
American Geophysical Union
Society of American Military Engineers
American Water Resources Association
Chi Epsilon National Civil Engineering Honor Society
The Engineer's Club of St. Louis