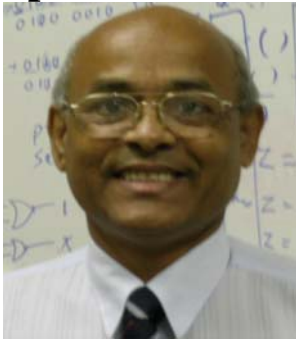


Nripendra N Sarker



Tel: 936 261 9861 (O), 979 739 7477 (C)
nSarker@pvamu.edu

Highlights

- 30+ years of experience in teaching and research at four universities around the globe.
- Developed a software for students to find their letter grades any time during a semester.
- Offered Online course (WebCT)
- Developed two laboratory manuals
- 2 years of industrial experience in USA. One software in use by fast-food restaurants, like, McDonand's, Taco Bell
- International Visiting Researcher at the University of Tsukuba, Japan
- Consultant to Intermediate Technology Development Group of United Kingdom
- Published papers in peer-reviewed International Journals mainly dealing with numerical analysis and modeling

Education

- **MS, Electrical Engineering**, Texas A&M University, USA, 12/1996
Thesis: Traffic flow simulation of radiographic images and video conferences in a LAN
- **PhD, Agricultural Engineering**, Texas A&M University, USA, 5/1993
Dissertation: Transient moisture gradients in rough rice mapped with FEM and related to fissures after heated air drying
- **MEng, Agricultural Engineering**, Asian Institute of Technology, Thailand, 4/1978
Thesis: Field study of agricultural mechanization in Comilla district, Bangladesh
- **BSEng, Agricultural Engineering**, Bangladesh Agricultural University, 12/1974.

Research Interest

Innovative Teaching Methods

Battlefield wireless nano-power sensor routing algorithm

Mobile Ad-hoc Network Technology

Diffusion through porous media

Finite Element and Finite Difference simulations

Physical and thermal properties of materials

Professional Experience – Academic, Industry and Consultancy

Prairie View A&M University September 1998 to present
Lecturer, Department of Engineering Technology

Teaching Assignments for Computer Engineering and Electrical Engineering Technology Programs (courses and labs):

- Programming and Software Engineering courses
- Computer Networks
- Data Communications
- Microprocessor Applications
- Digital Systems
- Operating Systems
- Computer Applications to Engineering Technology I and II
- Digital Hardware Design
- Digital Logics
- DC Circuits

Also taught

- Senior Project
- Independent Study
- Fundamentals of Engineering Technology to the students of Pre-College Institute at Prairie View A&M University in the Summers of 2005, 2006 and 2007
- Engineering Professional Concepts in Summer of 2006

Institutional Services

- Chair - Departmental ABET/SACS Committee, Fall 2005 to present
Prepare course-wise assessment plan, faculty responsibility for assessment, year-wise compilation of faculty assessments. Conduct surveys of responses from Alumni, Employers, Industrial Advisory Members, Graduate Advisors, Intern Supervisors; Prepare report to meet ABET and SACS accreditation requirements.

The CPET and ELET programs received 6-year accreditation by ABET. The ABET never received such a brilliant report for a long time. One ABET evaluator made a personal call to the Dean of the College of Engineering just to express his appreciation.

- Chair – Public Relations Committee, Fall 2007 to present
Prepare brochures for CPET and ELET programs, advise and prepare text materials for the departmental webpage, communicate with external bodies. Adopted Bryan and College Station High Schools and Blinn College at Bryan for recruitment. Attend Major Fairs for recruitment, maintain alumni database.
- Co-Chair – Industrial Advisory Council, Fall 2007 to present
- Member - College ABET Committee, Spring 2004 to present
Participate in the meetings to formulate new measures for course outcome assessment. Coordinate with the college committee for implementation in the department.
- Chair - Laboratory Enhancement Committee, Fall 2000 to Fall 2003
Assigned faculty responsibility for each lab. Prepared inventories and requisitions for new equipment for laboratories, faculty and staff; brought

equipment donations from Schlumberger and Xilinx in 2002 and 2004 respectively.

- Member - Departmental Search Committees for Chair and Administrative Secretary, Summer 2003 to Fall 2007
- Member - Departmental Curriculum Committee, Fall 2005 to Summer 2006
- Member - Departmental Laboratory Committee, Fall 2005 to present
- Chair - SACS Committee, Fall 1999 to Spring 2000
Prepared a 130-page report for 10 year institutional accreditation by SACS

Laboratory Manuals

Developed two laboratory manual for the following two courses:

1. Course CPET 4111 – Software Applications of Microprocessors Laboratory
2. Course CPET 3231 – Microprocessor Assembly Language Laboratory

Additional Services to the Department

- Prepared minutes of faculty meetings for 10 years
- Helped faculty to prepare their academic websites and the department for its website
- Maintain Alumni Database
- Write recommendation letters for alumni and career support letters for faculty in the department and faculty at Texas A&M University
- Worked with faculty of Engineering Technology Department at Texas A&M University to build joint program for capstone courses

Grant Proposals

Wrote a proposal for Faculty Development Support Award of \$10,000 from Non-Tenured HBCU/MI Program. The project title was, “Simulation of wireless sensor network using an efficient routing algorithm.”

Reviewer

- International Journal of Modern Engineering
- ASEE Annual Conference in Conference in Portland, June 2005

Major Academic Contributions

- First faculty to use website in teaching at Prairie View A&M University.
- A seminar on the advantage of using webpage in teaching and on learning HTML in creating webpage was given to the faculty of College of Engineering in Fall 1998. About 20 faculty attended the seminar. A separate seminar was given to students
- First faculty in the College of Engineering to offer WebCT course (Fall 2004)
- Prepared two junior and senior level laboratory manuals
- Advise students in registration
- Supervised students
 - Capstone projects of 5 undergraduate students in Fall 2006 and Spring 2007
 - Master of Science project of one international student from India (2006-2007)
- Software for students to track their letter grades any time during a semester
- Published papers in peer-reviewed journals and presented papers in conferences
 - One paper in Computer Journal in Education
 - Eight papers in ASEE regional conferences

- One paper in ASEE national conference

University of Texas at San Antonio January 1997 to May 1997

Associate Faculty, Division of Computer Science

Teaching responsibility of the following courses:

- Computer Organization (sophomore level)
- C Programming Language (sophomore level)
- Computer Architecture (junior level)

BCS Technology, Inc May 1999 to July 1999

Fuel Cell Designer

Designed and tested Hydrogen Fuel Cells up to 300W level. Reduce the outstanding problem of water accumulation inside cells.

Knowledge Based Systems, Inc July to September 1998

Programmer/Analyst

Visual BASIC programming to forecast cash flow in financial institutions.

Texas Digital Systems, Inc May 1997 to June 1998

Programmer/Analyst

Analyzed data flow between cash registers and back office main PC of fast food restaurants and wrote BASIC program to display real time orders to drive through customers. Company product sale boosted up by \$4,000,000.

Texas Transportation Institute January 1996 to August 1996

Graduate Research Assistant

Developed a C program to optimize traffic flow in highways by controlling vehicle entry at ramp using Operations Research approach.

Texas A&M University May 1989 to December 1995 & Sept. to December 1996

Teaching and Research Assistant

Taught and assisted lab courses on instrumentation and measurement, electricity in agriculture, Fortran language in engineering fundamentals, managed physical properties laboratory and guided laboratory co-workers, conducted research on physical and diffusion properties of cereal grains, and used Finite Element Method to simulate mass flow through porous media. Estimating moisture gradients during sorption in rice kernel was a breakthrough research.

Made several conference and workshop presentations of papers and posters. Published three papers in peer-reviewed international journals.

The University of Tsukuba, Japan September 1983 to March 1983

International Visiting Researcher

Worked on milling properties of rice at Yoshizaki Lab.

Published two papers. Taught measurement techniques of thermal properties to 20 international participants at *Japan International Cooperation Agency in Tsukuba Science City, Japan*.

Bangladesh Agricultural University August 1975 to December 1988

Associate Professor August 1986 to December 1988

Assistant Professor September 1978 to August 1986

Lecturer August 1975 to September 1978

Teaching Assignments for the following courses:

- Capstone Projects
- Agricultural Process Engineering
- Refrigeration and Air Conditioning
- Agricultural Power
- Agricultural Machinery
- Thermodynamics and Heat Engines
- Workshop Technology
- Farm Mechanics
- Computer Programming

Some Major Activities:

- Published technical papers in international journals, such as, Journal of Stored Products Research, Drying, Journal of Agricultural Mechanization in Asia, Africa and Latin America(AMA)
 - 6 papers in AMA, published from Japan
 - 1 paper in Journal of Stored Product Research , published from Canada
 - 1 paper in Drying Technology, published from United Kingdom
 - 2 papers in the TRANSACTIONS OF THE ASBAE
 - 3 papers in ASBAE annual conferences
 - 1 paper in the Symposium of Japanese Society of Agricultural Mechanization
 - 2 papers in research reports at the University of Tsukuba, Japan
- Received research grants from the Bangladesh Agricultural Research Council (grant of Taka 400,000)
- Presented papers at national and international conferences
- Supervised capstone projects of about 50 students
- Supervised two agricultural engineers during assessment of agro-industries in Bangladesh (1988)
- Member, University Academic Council (1986-1988)
- Member, Special Committees as desired by the Vice-Chancellor of the University
- Member, Board of Studies of Farm Power and Machinery (1975-1988)
- Member, National Tractor Testing Committee
- Member, The Institution of Engineers, Bangladesh
- Reviewer, Bangladesh Journal of Agricultural Engineers
- Consultant, Intermediate Technology Development Group, UK (1988)
- International Visiting Researcher, The University of Tsukuba, Japan (1983-1984)

- External Examiners at Dhaka Agricultural College and Patuakhali Agricultural College
- Administrator of student residential hall
- Cultural Secretary of Teachers' Club

Texas Digital Systems, Inc. College Station, TX July to August 1998
Consultant

Modification of code to interface new peripherals as needed.

Intermediate Technology Development Group, UK Sept to December 1988
Consultant

Assessed the Agro-Industrial status of Bangladesh particularly milling of rice and oilseeds. Designed the assessment methods and supervised two agricultural engineers.

Selected Honors

- Outstanding Male Teacher, recognized by the students of Pre-College Institute at Prairie View A&M University, Summer 2006.
- Who's Who Among America's Teachers, 2000
- Graduate Research and Teaching Assistantship, Texas A&M University, May 1989 to December 1996
- Research Assistantship, Texas Transportation Institute, January 1996 to August 1996
- International Visiting Research Fellowship, The University of Tsukuba, Japan, September 1983 - March 1984
- U.K. Government Scholarship to pursue M.S. at Asian Institute of Technology, Thailand, September 1976 - April 1978
- Merit Scholarships, Bangladesh Agricultural University, September 1967- March 1975
- Merit Scholarship from the Government of Pakistan, 1965-1966

Grants Received

- Equipment equivalent to \$1,786 from Schlumberger, Inc.
- Equipment equivalent to \$26,844 from Xilinx, Inc.
- Research grant of Taka 400, 000 from Bangladesh Agricultural Research Council

Grant Proposal Submitted

Wrote a proposal for Faculty Development Support Award of \$10,000 for Non-Tenured HBCU/MI. The project was to simulate wireless sensor network using a new routing algorithm.

Work Supervised

- Supervised 5 students in their capstone projects at Prairie View A&M University (2006-2007)
- Supervised Nidhi Sankhala, an international student to complete project in USA as part of her Master's degree in Computer Science from Sardar Patel University, India (2006 – 2007)
- Supervised 2 Agricultural Engineers in assessing the Agro-Industries in Bangladesh. The project was funded by the Intermediate Technology Development Group (ITDG) of United Kingdom (1988)
- Supervised about 50 undergraduate students in their capstone projects at Bangladesh Agricultural University (1978-1988)

Selected Professional Society Members/Services

- Member – American Society of Engineering Education
- Chair – Technical Session of 2006 GSW ASEE Annual Conference on March 10-12, 2006 in Baton Rouge
- Reviewer – International Journal of Modern Engineering
- Reviewer – ASEE 2005 Annual Conference in Portland, June 2005
- Reviewer – Journal of Bangladesh Society of Agricultural Engineers
- Reviewer – SBIR Grant Proposal

Publications

Refereed Journal Articles:

- **Sarker, N. N.** and M. A. Ketkar. 2007. Solving Partial Differential Equation with Microsoft Excel to Predict Temperature Profile of Stored Grain. *CoED Journal*, 17(3): 58-65.
- **Sarker, N. N.**, O. R. Kunze and T. Strouboulis. 1996. Transient moisture gradients in rough rice mapped with FEM and related to fissures after heated air drying. *Transactions of the ASABE*, 39(2):625-631.
- **Sarker, N. N.** and O. R. Kunze. 1994. Finite element simulation of rough rice drying. *Drying Technology*, 12(4):761-775.
- Sharma, A. D., O. R. Kunze and **N. N. Sarker**. 1992. Impact damage on rough rice. *Transactions of the ASABE*, 35(6):1929-34.
- Bala, B. K., **N. N. Sarker**, M. A. Basunia and M. A. Alam. 1990. Simulation of temperature changes during storage of wheat and rice. *Journal of Stored Products Research*, 25(2):1-6.
- **Sarker, N. N.** and S. M. Farouk. 1989. Some factors causing rice milling loss in Bangladesh. *Agricultural Mechanization in Asia, Africa and Latin America*, 20(2):49-52,56.
- Hussain, A. A. M. S. M. Farouk and **N. N. Sarker**. 1985. Improved animal drawn plow utilizing available draft power. *Agricultural Mechanization in Asia, Africa and Latin America*, 16(2):25-26.
- **Sarker, N. N.** and S. M. Farouk. 1982. Energy use for crop production in Bangladesh. *Agricultural Mechanization in Asia, Africa and Latin America*, 13(4):71-74.
- Hussain, A. A. M. and **N. N. Sarker**. 1981. Development of a low-cost hand sprayer. *Agricultural Mechanization in Asia, Africa and Latin America*, 12(2):59-60.

- **Sarker, N. N.** and R. I. Sarker. 1979. Agricultural mechanization strategies in Bangladesh. *Agricultural Mechanization in Asia, Africa and Latin America*, 10(2): 22-28.
- **Sarker, N. N.** and G. Singh. 1978. Field study of agricultural mechanization in the Comilla district, Bangladesh. *Agricultural Mechanization in Asia, Africa and Latin America*, 9(4):21-24.

ASEE Conference Papers

- **Sarker, N. N.** 2007. Teaming in the Laboratory. Proceedings of the 2007 ASEE Gulf-Southwest Annual Conference at The University of Texas at San Padre Island, March 28-30.
- **Sarker, N. N.** 2006 A senior level course in Computer Engineering Technology program. Proceedings of the 2006 ASEE Gulf-Southwest Annual Conference at Southern University and A&M College, Baton Rouge, March 16-17.
- **Sarker, N. N.** and M. Ketkar 2006. Multiple assessments and continuous improvement of Engineering Technology Programs. Proceedings of the 2006 ASEE Gulf-Southwest Annual Conference at Southern University and A&M College, Baton Rouge, March 16-17.
- Perron, L. J. and **Sarker, N. N.** Animation programming using Assembly Language. Proceedings of the 2006 ASEE Gulf-Southwest Annual Conference at Southern University and A&M College, Baton Rouge, March 16-17.
- Washington, A. and **Sarker, N. N.** Interactive Learning through the Usage of Java Scripting. Proceedings of the 2006 ASEE Gulf-Southwest Annual Conference at Southern University and A&M College, Baton Rouge, March 16-17.
- **Sarker, N. N.** and M. Ketkar 2005. Students eager to use Excel-based spreadsheet to boost their grades. Proceedings of the 2005 ASEE Gulf-Southwest Annual Conference at Texas A&M University, Corpus Christi, March 23-25.
- **Sarker, N. N.** and M. Ketkar. Developing Excel macros for solving heat diffusion problem. Proceedings of the 2004 ASEE Annual Conference and Exposition, June 20-23, 2004.
- **Sarker, N. N.** and M. Ketkar. Automating grading system for faculty and students. Proceedings of the 2004 ASEE Gulf-Southwest Section Conference in Lubbock, Texas, March 10-12, 2004.

ASBAE Conference Papers

- **Sarker, N. N.,** O. R. Kunze and T. Strouboulis. 1992. Fissuring of rough rice grains due to transient moisture gradients from heated air drying. *ASBAE Paper No. 92-6617*. ASBAE Winter Meeting in Nashville.
- **Sarker, N. N.** and O. R. Kunze. 1992. Dimensional changes in rice grain components due to moisture sorption. *ASBAE Paper No. 92-6617*. ASBAE Winter Meeting in Nashville.
- **Sarker, N. N.** and O. R. Kunze. 1991. Finite element prediction of grain temperature changes in storage bins. *ASBAE Paper No. 91-6560*. ASBAE Winter Meeting in Chicago.

Symposium Papers

- **Sarker, N. N.,** Y. Nishiyama, B. C. Paul and M. R. Islam. 1987. Crack generation in parboiled rice. In: *Proc. of International Symposium of Agricultural Mechanization and*

International Cooperation in High Technology Era. Japanese Society of Agricultural Machinery. April 3, 280-288.

In Research Reports

- Yoshizaki, S., S. Miyahara and **N. N. Sarker**. 1983. Losses of rice during whitening processes. In: Report of the Special Research Project on Tropical Agricultural Resources, The University of Tsukuba, Japan. Vol. 2:121-132.
- **Sarker, N. N.** and S. Miyahara. 1984. Breakage characteristics and bran particle distribution of selected rice varieties during whitening process using friction roll type machine. In: Report of the Special Research Project on Tropical Agricultural Resources, The University of Tsukuba, Japan. Vol. 3:157-168.

Professional Development

- Participated in MSDN Event on ASP.NET 2.00, Houston, September 15, 2005
- Participated in WebCT courses in 2001. Offered one online course in Fall 2004
- Participated in a three-day training session on Microsoft Windows Server 2003 held in March 16-18, 2004
- Participated in a Xilinx sponsored workshop at Georgia Institute of Technology on October 18-19, 2004