

Yuh-Yuan Shyy

Scientist I

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ASSIGNMENT: Automation and Bio-Sensing Development – 50%.
Information Technology Management for ISU Seed Testing Service – 25%.
Risk Assessment Support and IT Management for BIGMAP – 25%.

RESEARCH AREAS:

- Development of new technologies to nondestructive evaluation the seed quality by using computer imaging,
- Optical system, and ultrasound/NIR techniques.
- Development of Real-time in-line system to monitor the capacity and quality of seeds during conditioning.
- Development of new technologies to condition the seeds and improve the quality and efficiency.
- Database development, information system management and Total Quality Control for Seed Testing Laboratory.
- Sensor Development and Data Analysis for DNA/PCR Testing for GMO Seeds.
- Database and software development for risk assessment and decision making on Bio-safety issues.

EDUCATION:

PhD, Agricultural Engineering, 1984, Iowa State University, Ames, Iowa.
MS, Agricultural Engineering, 1981, Iowa State University, Ames, Iowa.
B.Sc., Agricultural Engineering, 1975, National Taiwan University, Taipei, Taiwan.

EMPLOYMENT:

1999 – Present: Scientist I, Seed Science Center, Iowa State University.
1994 - 99: Associate Scientist, Seed Science Center, Iowa State University.
1988 - 94: Research Associate, Seed Science Center, Iowa State University.
1984 - 88: Post-Doctoral, Seed Science Center, Iowa State University.

US PATENTS AND AWARD:

- Visiting Professor, Jilin Academy of Agricultural Sciences, Jilin, China, 2005.
- Honorary Professor, Heibei Academy of Agricultural Sciences, Heibei, China. 2004.
- Excellence Service Award, United Nations Development Programs, China Project. 2003.
- Chief Technical Advisor, China Seed Industry Development Project, UNDP, 2002-2005.
- Chief Technical Advisor, China Yellow River Saving Project, UNDP/China, 2003-2004.
- UNDP International Consultant, China Projects, 1993 – 2005.
- Professional & Scientific Excellent Award, ISU, 1994.
- US Patent 6,805,014, "Method of measuring flow rate of flowable material under continuous flow condition"
- US Patent 4,991,721, "Automation of the Seed Cleaning Equipment."
- US Patent 5,024,334, "Method and Means for Gravity Table Automation".
- US Patent 5,309,374, "Acoustic and Video Imaging System for Quality Determination of Agricultural Products".
- US Patent 5,422,831, "Acoustic and Video Imaging System for Quality Determination of Pharmaceutical Products".
- CIP of "Method of measuring flow rate of flowable material", Patent Pending, Filed 7/1/2004.

SELECTED FUNDING (1994 –2005):

- 3-month Training program for water-saving agriculture from UNDP China Project (PI), \$42,000.
- 12-month Training program for small-town enterprise management, UNDP China Project (PI), \$21,000.
- Field-testing for the grain depth measurement system, present. CATD/Tri-State (Co-PI), \$36,630.
- New Technologies for depth measurement, 1998 - 1999. CATD/Tri-State (Co-PI), \$67,396.
- New Technologies for seed flow measurement, 1997 - 98. CATD/Asgrow (Co-PI), \$54,776.