

Tsai Lu Liu

Professor and Head of the Department of Graphic Design and Industrial Design
College of Design, North Carolina State University

Education

Master of Industrial Design	Auburn University	1992
MBA in Marketing	Georgia State University	1990
B.Eng. in Industrial Design	National Cheng Kung University	1985

Professional Experience

Professor and Department Head	NC State University	2012 - present	<p>Provide academic and administrative leadership of a department of four degree programs in graphic design and industrial design with 17 tenured/tenure-track faculty members and 250 majors</p> <p>Serve as Department representative to the College Administrative Council</p> <p>Serve as a senior advisor to the Dean on College policy, faculty affairs, and strategic plans</p> <p>Develop new and strengthen existing relationships with alumni, corporate, professional, and community groups. (Fund for Excellence has doubled since 2012)</p> <p>Established corporate-sponsored research and design partnerships with Becton & Dickinson Medical, Bosch-Siemens Home Appliance, Coca Cola, Eastman Chemical, IBM, Lowes Home Improvement, and SAS Institute</p> <p>Facilitate faculty and graduate student research. (Funded research has doubled since 2012)</p> <p>Expanded graduate programs. (Graduate enrollment has increased by 27%)</p> <p>Created new student internship and professional career opportunities</p>
Faculty Member, PhD in Design	NC State University	2012 - present	<p>Mentor and advise PhD students: currently serve as the committee chair of 2 PhD students and the committee member of 2 other PhD students.</p> <p>Participate in PhD faculty meetings and committees</p>
Acting Associate Dean of Research & Academic Affairs College of Architecture, Design and Construction	Auburn University	2011 - 2012	<p>Responsible for the administration of the academic and research affairs for a college of 60 faculty members and 1,200 majors in Architecture, Building Science, Community Planning, Environmental Design, Graphic Design, Industrial Design, Landscape Architecture</p> <p>Served as College representative to the University Academic Affairs meetings</p> <p>Served as College representative to the University Research meetings</p> <p>Participated in Provost meetings with Deans</p>

Tsai Lu Liu

Associate Professor	Auburn University On the faculty of both: Department of Industrial and Graphic Design, and Honors College's interdisciplinary co-teaching team (Planned and delivered the "Technology and Culture" course series)	2009 - 2012
Assistant Professor	Auburn University On the faculty of Department of Industrial and Graphic Design	2004 - 2009
President	Emman Technologies, Inc. Founded and managed this 10-employee company. Designed and produced therapeutic products for children with disabilities in Taiwan, Singapore, and Australia.	2002 - 2004
Adjunct Lecturer	Shu Te University Taught design courses for the Department of Product Design	2003 - 2004
President	Paragon Micro International, Inc. Led and managed this 15-employee technology developer of multimedia online advertisement delivery systems Delivered one of the first online video commercials in Taiwan, China, and Japan	2000 - 2002
Director, Product Development	Micro Sova Ltd. Led and managed an interdisciplinary team of engineering, design, marketing, and production professionals to develop electronic gaming systems for arcades for this 60-employee company Successfully introduced new products to American and European markets	1998 - 2000
VP, Marketing & Product Mgt.	Cybertel, Inc. Managed the marketing, sales, and product-management teams of Internet telecommunication technologies Introduced internet telecommunication systems to Internet Service Providers in Asia	1997 - 1998
Manager, Design & Marketing	TCV Industries, Ltd. Led marketing and design teams of this 150-employee producer of children's electric ride-on toy vehicles Planned, developed, and introduced new products to international markets	1995 - 1998
Industrial Designer	Design Principles, Inc. Co-founded this start-up firm, designing and producing emergency medical service products	1992 - 1995
Designer	Kaowu Architecture & Construction Co. Responsible for the corporate identify of a major developer/builder of high- rise buildings in the second largest city in Taiwan	1987 - 1988

Honors

Keynote Speaker	<i>The International Forum on Innovation and Emerging Industries Development (IEID)</i> "The Next Chapter of Digital Creativity and Innovation" Chinese Academy of Engineering and Shanghai Municipal Government	2016
Keynote Speaker	<i>The 8th International Conference on Planning and Design</i> "The Future of Design Practice and Design Education" National Cheng Kung University/Ministry of Science and Technology Taiwan	2015
Keynote Presentation	<i>Include 2009: International Conference on Inclusive Design</i> "Vivisi: a system of musical illumination" Royal College of Art, London, United Kingdom	2009

Awards

Outstanding Extension Service Award	<i>NC State University</i>	2013
Inventor Award	<i>Southern Growth Policies Board</i>	2010
Outstanding Faculty Award	<i>Auburn University Student Government Association</i>	2007
Outstanding Teaching Award	<i>College of Architecture, Design, and Construction Auburn University</i>	2006
Outstanding Teaching Award	<i>College of Architecture, Design, and Construction Auburn University</i>	2005

Conferences Organized

2015 Universal Design Symposium	<i>NC State University</i> More than 100 participants from 10 states and six countries	2015
The 2 nd Service Design Symposium: <i>Innovation in Service Design</i>	<i>NC State University</i> Collaborated with the <i>Institute for Emerging Issues</i> More than 50 participants throughout North Carolina	2015
North Carolina Service Design Symposium	<i>NC State University</i> More than 100 participants throughout North Carolina	2014

Presentations to International Conferences

Industrial Designers Society of America 2011 International Conference	<i>"If It's Good for Users and Business, Is It Good for Designers?"</i>	2011
Industrial Designers Society of America 2010 International Conference	<i>"The Engine behind Innovation: DIY Solutions and Portable Generators"</i>	2010
Industrial Designers Society of America 2008 International Conference	<i>"Compete only when Competitive: Industrial Design Strategies of the Micro Economies such as Taiwan, Hong Kong, and Singapore"</i>	2008

Invited Presentations and Lectures

Panelist, 2016 IDSA National Education Symposium Detroit, Michigan	<i>"Make Things Happen in Your Academic Career"</i>	8/17/2016
Franklin Humanities Institute Duke University	<i>"Beyond Compulsion and Compliance: ADA and Universal Design"</i>	9/15/2015
Universidad De Bogota Jorge Tadeo Lozano Bogota, Colombia	<i>"The Future of Design Education"</i>	7/28/2015
Milwaukee Institute of Art and Design	<i>"The Application of User Research in Product Design"</i>	4/28/2011
National Taiwan University of Science and Technology Taipei, Taiwan	<i>"From Curiosity to Reality, the Journey of User-Centered Design"</i>	11/3/2010
Auburn University Outreach Scholarship Symposium	<i>"Creating Jobs by Creating Designed Centered Business"</i>	4/22/2009
Alabama Art Education Association 2008 Conference	<i>"Shaping Tomorrow's Products"</i>	10/25/2008
Politecnico di Milano University Milan, Italy	<i>"The Application of Universal Design Principles to Product Design"</i>	3/28/2007
The Helen Hamlyn Research Center Royal College of Art London, United Kingdom	<i>"Children's Play Product Designs Created with Universal Design Principles"</i>	1/11/2007

Grants

2015 IBM Corporation Faculty Award	IBM	\$19,000	2015
Eastman Innovation Lecture Series	Eastman Chemical	\$10,000	2015
Graduate Student Recruitment Fund	Eastman Chemical	\$4,000	2014
2013 IBM Corporation Faculty Award	IBM	\$12,000	2013
Alabama Construction Industry Fund Research and Development Grant	Alabama Construction Industry Fund	\$168,000	2010
Competitive Outreach Scholarship Grant	Auburn University	\$61,000	2006

Papers

Noel, Lesley-Ann and Tsai Lu Liu (2016). "Using Design / Design Thinking to Create a New Education Paradigm for Elementary School Learners." Conference Proceedings, 2016 Design Research Society 50th Anniversary Conference; Brighton, UK

Eftekhari, Farzaneh and Tsai Lu Liu (2016). "A Design Approach for Risk Communication, the Case of Type 2 Diabetes." Conference Proceedings, 2016 Design Research Society 50th Anniversary Conference; Brighton, UK

Sun, Yingying and Tsai Lu Liu (2016). "Product Portfolio Strategies in Industrial Design Education." Conference Proceedings, Industrial Designers Society of America (IDSA) National Education Symposium; Detroit, Michigan

Liu, Tsai Lu (2011). "A Comparison Study of the Application of Third-Person and First-Person Point of View Videography in Empathic Design Process." Conference Proceedings, 4th World Conference on Design Research, The International Association of Societies of Design Research (IASDR); Delft University of Technology, Delft, Netherlands

Liu, Tsai Lu (2011). "Do You See What They See? A New Approach to Video Ethnography." Conference Proceedings, Industrial Designers Society of America (IDSA) National Education Seminar; New Orleans, Louisiana

Pettit, Lauren and Tsai Lu Liu (2011). "More Meaning in Everyday Experiences: A User-Centered Approach to Interactive Product Packaging." Conference Proceedings, Industrial Designers Society of America (IDSA) National Education Seminar; New Orleans, Louisiana

Liu, Tsai Lu (2011). "From Overwhelming to Welcoming: 'Design Challenge' Sessions in Industrial Design Studio Class." Conference Proceedings, 2011 International Design Alliance Education Conference; Taipei, Taiwan

Liu, Tsai Lu (2011). "Including People's Psychological Needs in Social Innovation." Conference Proceedings, Include 2011: International Conference on Inclusive Design: Royal College of Art, London, UK

Pettit, Lauren and Tsai Lu Liu (2011). "Interactive Product Packaging: The Future of Packaging Design." Design Principles and Practices: An International Journal, Volume 5

Liu, Tsai Lu (2010). "Beyond Physiological Needs, a Broader Spectrum of Universal Design's Focus on Hierarchy of Needs." Conference Proceedings, The Third International Conference for Universal Design; Hamamatsu, Japan

Reynolds, Alex and Tsai Lu Liu (2010). "The Study of Children's Emotional Responses and Its Application to the Redesign of the Traditional Dental Handpiece." Conference Proceedings, 7th International Conference on Design and Emotion: Illinois Institute of Technology, Chicago, Illinois

Liu, Tsai Lu (2010). "Stigmatization and Segregation: New Fronts of Universal Design." Conference Proceedings, Industrial Designers Society of America (IDSA) National Education Seminar; Portland, Oregon

Liu, Tsai Lu (2009). "Every Sheet Matters: Design Research based on a Quantitative User-Diary of Paper Towels." Design Principles & Practices: An International Journal, Volume 4

Liu, Tsai Lu and Foster Phillips (2009). "Vivisi: a system of musical illumination." Conference Proceedings, Include 2009: International Conference on Inclusive Design: Royal College of Art, London, UK

Liu, Tsai Lu (2008). "Design for Construction Workers: A Collaboration Project between Industrial Design and Building Science Education." Conference Proceedings, Industrial Designers Society of America (IDSA) National Education Seminar; Arizona State University, Arizona

Liu, Tsai Lu and Victoria Hannum (2008). "Integrating the Marketing Function into Industrial Design Education." Design Principles and Practices: An International Journal, Volume 2

Liu, Tsai Lu and Whitney Skinner (2008). "User-Centered Design Evaluation by Application of Biofeedback Technologies." The International Journal of Technology, Knowledge, and Society, Volume 4

Liu, Tsai Lu (2007). "A From-Disabled-To-Able Approach to the Universal Design of Children's Play Products." Conference Proceedings, Educational Seminar, Icsid (International Council of Societies of Industrial Design)/IDSA (Industrial Designers Society of America) World Design Congress; San Francisco, California

Liu, Tsai Lu and Mark Smith (2007). "A Research toward the Proposal of a Design Based Manufacturing Industry in the Black Belt Region of the United States." The Third International Conference on Technology, Knowledge, and Society; Cambridge University, UK

Liu, Tsai Lu (2007). "Creating Jobs by Managing Design in High Unemployment Communities." Conference Proceedings, International Conference on Design Management; Seoul, Korea

Liu, Tsai Lu (2006). "Everybody Can Play: Including Children without Disabilities in the Design of Pediatric Therapeutic Products." Conference Proceedings, The Second International Conference for Universal Design; Kyoto, Japan

Liu, Tsai Lu (2005). "The Focus of Industrial Design Education: Perspectives from the Industry." Conference Proceedings, Industrial Designers Society of America (IDSA) National Education Conference; Virginia Polytechnic Institute and State University, Virginia

Liu, Tsai Lu and Victoria Hannum (2005). "Form Follows What Function?" Conference Proceedings, The Third International Conference on Planning and Design, College of Planning and Design; National Cheng Kung University, Taiwan

Liu, Tsai Lu (2005). "Beyond PhD., Expectation from American Design Industry." Conference Proceedings, Joining Force Design Research Conference, a seminar of 2005 World Design Congress, University of Art and Design; Helsinki, Finland

Sponsored Research/Innovation/Design Projects: Total: \$1,000,000

Sponsors/Collaborators	Year	Project Areas
Coca Cola	2016	Customer Experience for a New Product Category
NC Museum of Natural Science	2016	Museum Experience for Children with Autism
SAS Institute	2016	User Experience for People with Visual Challenges
TTi	2016	Ryobi™ Garage System
Under Armour	2016	Video Ethnography based New Product Concepts
Victoria + Albert	2016	Shower Tray of Inclusive Design
LG Electronics	2016	Bluetooth Speakers
Coca Cola	2015	Consumer Brand Experience Design
Lowes Home Improvement	2015	Products for Residential Garages
IBM	2015	Collaborative Workspace
Bosch-Siemens Home Appliances	2015	Residential Dish Washer
TTI	2015	Products for Outdoor Sports Events
SAS Institute	2015	Data Management User Experience

WebAssign	2015	Online Learning Experience
Institute for Emerging Issues	2015	Emerging Issues Commons
Hanes Brands	2015	Women's Sports Underwear
Becton, Dickinson and Company	2014	Medical Devices for Diabetic Patients
ARCA	2014	Cash Dispensing Systems
IBM	2014	Gamification of Data Analytics
SAS Institute	2014	Visual Data Analytics
Eastman Chemical	2014	Exploration of Acetate's Applications
TTI	2014	Construction Site Mobility
Bioventus	2013	Ultrasound Bone Healing Systems
UNC Healthcare	2013	Toys for Hospitalized Children
Bosch-Siemens Home Appliances	2013	Residential Ovens
JLG	2013	Lift Systems for Construction Site
SAS Institute	2013	Gamification of Data Analytics
Eastman Chemical	2013	Wood Furniture with Extruded Plastic
Coca Cola	2012	In-Store Brand Experience
Broan-NuTone LLC	2012	Universal Design of Home Appliance
Johnson & Johnson	2011	Oral Care Products
Generac	2009 - 2011	Portable Generators/Pressure Washers
Alabama Construction Industry Fund	2006 - 2011	Construction Site Tools and Equipment
Georgia Pacific	2007	Paper Towel Consumer Behaviors
Great Southern Woods	2008	Portable On-Demand Storage
Auburn University College of Veterinary Medicine	2006	Wireless Small Animal Electrocardiograph
Hi-Star Co., Ltd	2006	Family Game Products
Unlimited Play	2005	Inclusive Playground
Spectrum Brands	2004	Product Packaging Innovation

Services to the Universities

Administrative Advisory Committee on Faculty Well-Being	NC State University	2015 - present
Intellectual Property Committee	NC State University	2014 - present

Administrative Council	College of Design NC State University	2012 - present
Watauga Medal Selection Committee	NC State University	2013 - present
Park Faculty Mentor	NC State University	2014 - present
Advisory Group, Building Future Faculty Program	NC State University	2015 - 2016
Marketing and Communication Director Search Committee	College of Design NC State University	2015
Advisory Council	Honors College Auburn University	2011 - 2012
Environment Design Program Chair Search Committee (Chair)	College of Architecture, Design & Construction Auburn University	2012
Multicultural Diversity Committee (Chair)	Auburn University	2008 - 2011
Patent and Invention Disclosure Committee	Auburn University	2008 - 2012
Persons with Disabilities Committee	Auburn University	2007 - 2011
Competitive Research Grant Committee	Auburn University	2006 - 2008
Executive Committee	College of Architecture, Design & Construction Auburn University	2006 - 2007
Academic Committee of Graduate Program in Product Design	Universidad De Bogota Jorge Tadeo Lozano	2015 - present