

Biography of Professor Nam Pyo SUH:

Prof. SUH is the Director of the Park Center for Complex Systems at MIT. He has been a faculty member at MIT since 1970. He was the Head of the Department of Mechanical Engineering from 1991 to 2001. During this period he was the Founding Director of the MIT Laboratory for Manufacturing and Productivity. He was also the Founder and Director of the MIT-Industry Polymer Processing Program, the Head of the Mechanics and Material Division of the Mechanical Engineering Department, and a member of the Engineering Council of MIT.

In October 1984, President Ronald Reagan appointed Prof. SUH to the National Science Foundation to be in charge of engineering. During his tenure at NSF, he created a new direction for the Engineering Directorate and introduced a new organizational program structure for supporting engineering research in order to strengthen engineering education and research and to assure that the United States would occupy a leadership position in engineering well into the 21st century.

Prof. SUH has received many awards and honors. He received three honorary doctoral degrees. He received the Gustus L. Larson Memorial Award; the Blackall Award; the Best Tribology Paper Award; the William T. Ennor Manufacturing Technology Award from ASME; the F.W. Taylor Research Award of SME; the SPE Best Paper Award; the Federal (NSF) Engineer of the Year Award from NSPE; and the American Society for Engineering Education Centennial Medallion. He was also awarded the National Science Foundation's Distinguished Service Award and the KBS Korean Compatriot Award for Scholarly Achievements. He was also the winner of the 1997 Ho-Am Prize for Engineering and in 2000, he was the recipient of the Mensforth International Gold Medal of the Institution of Electrical Engineers of the United Kingdom. In 2001, he received the Hills Millennium Award from the Institution of Engineering Designers of the United Kingdom.

Prof. SUH is an honorary professor at Yanbian University of Science and Technology, China;

Honorary Professor of the University of Hong Kong, and an Eminent Visiting Professor at the Korea Advanced Institute of Science and Technology, Korea. He has been on visiting committees of Georgia Institute of Technology, Stanford University, the University of Michigan, and the University of California - Berkeley.

Prof. SUH is listed in Who's Who in The World, Who's Who in America, Who's Who in Science and Technology. He is a Fellow of ASME and SME. He is a member of Pi Tau Sigma, Sigma Xi, Phi Kappa Phi, ASEE, SPE, and AAAS. He is also a Foreign member of the Royal Swedish Academy of Engineering Science (IVA), a member of the Collège International pour l'Etude Scientifique des Techniques de Production Mécanique (CIRP), and a Life Fellow of the Korean Academy of Science and Technology.

Prof. SUH holds more than 50 patents. He is the author of seven books and about 300 papers and, he has edited several books. His work has been translated into Chinese, Japanese, and Korean.

Professor SUH is a Series Editor for the Advanced Manufacturing Series and an Editor of the MIT/Pappalardo Series in Mechanical Engineering of Oxford University Press. He was also the Founding Co-Editor-in-Chief of the International Journal, Robotics and Computer-Integrated Manufacturing and also serves on editorial boards of many journals.

His contributions to the field of tribology include the delamination theory of wear, the solution wear theory, a theory on the genesis of friction, coated cutting tools, the use of undulated surfaces to lower friction and wear, and new electrical connectors for computers.

He also invented new kinds of electric connectors that have low friction and low contact resistance (produced by Tribotek). In the field of design, he has developed the subject of axiomatic design (the Design Axioms and the associated design methodologies) in an attempt to develop the science base for the field of design. He also advanced the theory of complexity and the concept of Functional Periodicity.

In the field of polymer processing, he invented many industrially-important processes and devices, including microcellular plastics (commercially known as MuCell), the USM foam molding process, the Axiometer for moisture measurement in polymers, the Electrostatic Charge Decay NDE technique, and the foam/straight plastic lamination/forming process (sold in billions).

In metal processing, he is the inventor of a new metal processing technique called the Mixalloy Process. He has designed and is currently developing fuel efficient, low emission engines.

Prof. SUH has consulted worldwide with governments, industrial organizations and universities.

Professor SUH was educated at Buckingham, Browne and Nichols School (1955), MIT (S.B., 1959, and S.M., 1961) and Carnegie-Mellon University (Ph.D., 1964).

Biography of Dr. Dan ACUNA:

Dr. ACUNA has worked for international and American companies including: oil petroleum (1976), steel manufacturing (1978), paper (1983), food (1986), and training companies (1990).

He received his Ph.D. at ENSAM in Paris in the area of scientific methods of product design, and his M.S. at Polytechnic University in Brooklyn New York. Dr. ACUNA is a Professional Engineer Intern from Chicago Illinois, and a Certified Quality Engineer by the American Society for Quality.

In 2001, he presented two seminars at ENSAM Paris in the area of Taguchi Techniques including Tuning. These seminars were taught with Dr. Genichi TAGUCHI from Japan.

Dr. ACUNA was a visiting scholar for a year at MIT. It was Prof. Nam Pyo SUH who trained him in product design using Axiomatic Design.

He is a visiting faculty member associated with the research lab Product Design and Innovation (LCPI) at ENSAM in Paris.

He is trilingual in English, French and Spanish.

His research interests are product design, product optimization and innovation.

Programme de formation

Mercredi 16 mars 2005 :

9 h – 12 h

Introduction à la conception
Axiomatique

12 h – 13 h

Déjeuner.

13 h – 14 h

Séance d'analyse des problèmes
et des solutions

14 h – 17 h

Conférence sur les exigences
fonctionnelles multiples

Jeudi 17 mars 2005 :

9 h – 12 h

Conférence sur la conception
des systèmes complexes

12 h – 13 h

Déjeuner.

13 h – 14 h

Théorie et application de la complexité

14 h – 17 h

Séance de clôture du séminaire

Informations :

e-mail : nam.suh@paris.ensam.fr

Langue : anglais (traduit en français)

Prix : 400 euros (2 jours, déjeuners et pauses compris)

Inscription : bon de commande ou chèque à :

SERAM 151 Bd de l'Hôpital 75013 Paris

Tél. : 01 42 16 86 76

Agrée FC : 11 75 19 02 675

Sites web :

www-me.mit.edu/people/personal/npsuh.htm

www.paris.ensam.fr/cpi

Le Laboratoire CPI

Le laboratoire Conception de Produits et Innovation a été créé à l'ENSAM en 1973. Il a développé une expertise dans ce domaine. Son activité de recherche est transversale : **« optimisation des processus de conception et d'innovation ».**

L'objectif est de développer de la connaissance par la construction et l'optimisation de modèles théoriques des processus liés à l'activité de conception et d'innovation. L'évaluation de ces modèles dans un contexte opérationnel permet d'identifier et de valider des paramètres d'optimisation, des méthodes et des outils. L'intégration de ces connaissances contribue à une dynamique d'avancée scientifique et de progrès industriels par la construction de modèles génériques. Il s'en dégage 3 axes :

Axe 1 : ingénierie de projets

Axe 2 : modélisation et intégration des métiers

Axe 3 : modes de représentations intermédiaires du produit

Les activités du LCPI contribuent à produire, formaliser, et diffuser les connaissances et le savoir faire par :

- une reconnaissance scientifique des travaux, notamment par les publications scientifiques,
- une formalisation des méthodes de travail et d'interventions auprès des partenaires,
- une construction des projets transdisciplinaires.

La réflexion majeure du laboratoire est le design au sens anglo-saxon du terme, c'est-à-dire les méthodes industrielles et la conception même du produit. Le design caractérise la conception globale du produit qui prend en compte à la fois les impératifs mécaniques, esthétiques, les attentes de l'utilisateur et les contraintes des systèmes de production sur l'ensemble du cycle de vie du produit. Cette recherche mobilise plusieurs métiers (ingénieur, ergonomiste, designer,...) qui se concentrent dans une démarche pluridisciplinaire sur le processus de conception.

Renseignements :

ENSAM – LCPI 1612 Chemin Sauvecanne 13320 BOUC BEL AIR
Tél. : 04 42 94 30 91 labocpi@wanadoo.fr



Formation sur la Conception Axiomatique et les Systèmes Complexes



Dispensée par :

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et Dan ACUNA, Ph.D. (ENSAM, Paris)

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