BIOGRAPHICAL SKETCH

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NAME	POSITION TITLE
Gossard, David C.	**Professor**
eRA COMMONS USER NAME	

EDUCATION/TRAINING *(Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)*

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
Purdue University, Lafayette, IN	BS	1968	Mechanical Engineering
Purdue University, Lafayette, IN	MS	1970	Mechanical Engineering
M.I.T., Cambridge, MA	PhD	1975	Mechanical Engineering

A. PROFESSIONAL EXPERIENCE

1975-1979 Assistant Professor, Department of Mechanical Engineering, M.I.T.
1979-1981 Assoc. Professor without tenure, Dept. of Mechanical Engineering, M.I.T.
1981-1989 Assoc. Professor with tenure, Dept. of Mechanical Engineering, M.I.T.
1989-present Full Professor, Dept. of Engineering, M.I.T.

OTHER EXPERIENCE

1989 member, Study Committee: "International Developments in Computer Science and Technology,"
Computer Science & Technology Board, National Academy of Science.

1995 Presenter, 1st Annual Symposium on Frontiers of Engineering, National Academy of Engineering.

1995-1997 Founder and President of New Technologies, Inc. (while on professional leave from M.I.T.), a company to commercialize surface design software technology developed as M.I.T. research project. Company sold to Structural Dynamics Research Corporation, Cincinnati Ohio in 2000.

AWARDS

1982 Society of Manufacturing Engineers Outstanding Young Engineer of the Year

PATENTS

Patent #4,408,471- "Adaptive Pressbrake Control", Gossard, D.E., Hardt, D.E., Stelson, K.A., Allison, B.T., West, J.A., Webb, R.D. , October 11, 1983.

Patent # 5,237,647 - "Computer Aided Drawing in Three Dimensions", Roberts, A.F., Sachs, E.M., Stoops, D. R., Ulrich, K. T., Siler, T., Gossard, D.C., Celniker, G.W., August 17, 1993.

B. PUBLICATIONS (Partial)

Celniker, G. and Gossard, D.,"Deformable Curve and Surface Finite-Elements for Free-Form Shape Design", Computer Graphics, v 25, n 4, July 1991, pp. 257-266.

Fang L, Gossard D, "Multidimensional curve-fitting to unorganized data points by nonlinear minimization", Computer-Aided Design 1995; 27:48-58.

Kumar A, Gossard D, "Synthesis of Optimal Shape and Topology of Structures", Transactions of the ASME 1996; 118:68-74.

Chang M, Gossard D, "Modeling the Assembly of Compliant, Non-ideal Parts", Computer-Aided Design 1997; 29:701-708.

Shimada K, Gossard D, "Automatic triangular mesh generation of trimmed parametric surfaces for finite element analysis", Computer Aided Geometric Design 1998; 15:199-222.

King J, Haase-Pettingell C, Gossard D, "Protein Folding and Misfolding", American Scientist 2002; 90:445-453.

Gossard, D.C and King, J. (2005) Lattice transformations and subunit conformational changes in phage capsid maturation. *J. of Theoretical Med.,* **6,** 99-105.

Pintilie, G., Zhang, J., Chiu, W., Gossard, D., (2009), Identifying Components in 3-D Density maps of protein nanomachines by multi-scale segmentation, IEEE, Proc. Of LISSA, April 9-10. Submitted to Pubmed, Status is "Approved", waiting for PMID to be assigned.

Pintilie, G., Zhang, J., Chiu, W., Gossard, D., (2009) "Segmentation and fitting of molecular components in cryo-EM density maps: quantitative analysis of a multi-scale region-based approach". Submitted to J. Struc. Biol.