

# Stanford

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## James L. Adams

Professor of Industrial Engineering and Engineering Management and of Mechanical Engineering, Emeritus

### Bio

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#### BIO

Professor Adams attended Caltech (B.S.), U.C.L.A. (one year of art), served a tour in the Air Force, and held short-term jobs in design and development in industry (Hunter Douglas, Shell Oil Co. General Motors) before receiving his Ph.D from Stanford (Mechanical engineering with an art minor). After receiving the degree he was employed by the Jet Propulsion Laboratory in Pasadena, California where he was involved in the design of the first spacecraft to explore the Moon, Venus and Mars. He joined the Stanford faculty in 1966. The courses he has taught at Stanford range from mechanical and product design through courses having to do with the nature of technology.

He is particularly interested in issues having to do with the management of creativity and change in technology-based organizations, with the design process and product design, and with the emotional aspects of technology. He has consulted and conducted seminars on the topics of creativity, innovation, general problem-solving, organizational change, management of R&D, planning, and design for over 100 commercial clients, ranging from large to small and technical to financial. He has also been a consultant and lecturer to a large number of government, educational, and professional groups and been a faculty member in many executive programs at Stanford.

He is the author of *Conceptual Blockbusting*, a popular book on creative thinking, *The Care and Feeding of Ideas*, a book directed toward the management of creativity and change, *Flying Buttresses*, *Entropy*, and *O-Rings*, a book on the nature of engineering, and *Good Products Bad Products*, a book on overall product quality.

If you would like more information on him, click on the expanded resume link.

#### ACADEMIC APPOINTMENTS

- Emeritus Faculty, Acad Council, Mechanical Engineering

#### ADMINISTRATIVE APPOINTMENTS

- Academic Senate, Stanford, (1970-1995)
- Associate Dean for Academic Affairs, Stanford School of engineering, (1975-1985)
- Chair Department of Industrial Engineering and Engineering Management (Now M.S.&E), Stanford School of Engineering, (1978-1981)
- Chair - Program in Values, Science, Technology, and Society (Now S.T.S.), Stanford, (1983-1993)
- Chair - Faculty Advisory Board, Stanford, (1986-1987)
- Associate Dean for Special Projects, Stanford School of Engineering, (1995-1997)

## HONORS AND AWARDS

- Various teaching awards, Stanford
- Geckenheimer award for creativity, Georgia Tech
- Lyman award for service to alumni, Stanford Alumni Association
- Dinkelspiel award for service to undergraduates, Stanford
- Sigma Xi Lecturer, Sigma Xi

## BOARDS, ADVISORY COMMITTEES, PROFESSIONAL ORGANIZATIONS

- Board member and Technical Director, Mass Immuno systems (1985 - 1990)
- Founding President, Technology Center of Silicon Valley (now The Tech) (1987 - 1990)
- Member California Governor's Panel on Toxic Wastes, State of California (1989 - 1991)
- Advisory Committee, Chile Engineering 2030, CORFO (2014 - present)

## PROGRAM AFFILIATIONS

- Science, Technology and Society

## LINKS

- Expanded Resumé: <http://people.stanford.edu/jla/>
- My People and Products Blog: <http://jamesladams.typepad.com/>

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

I have for some time been working on two books. The working title for one is Making, Fixing, and Tinkering, and it concerns the benefits of working with the hands. The other has a working title of Homo Demi Sapiens, and is about the balance of creativity and control in very large groups (societies, religions, etc.). I am also revising a book entitled The Building of an Engineer, which I wrote for my aging mother and self-published. It is somewhat autobiographical, and although it is available on Amazon, I do not consider it quite ready for public reading.

## Publications

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### PUBLICATIONS

- see "writings" on expanded resume link (<http://people.stanford.edu/jla/>) for all publications including books *null*  
Adams, J.  
0000; null (null)
- **Printed Circuit Mariner R Ring Harness** *SPS 37-24*  
Adams, J., L.  
; IV: 55-56
- **Integration of Packaging, Cabling, Structure, and Thermal Control** *SPS #37-20*  
Adams, J., L.  
; IV: 31-32
- **A Comparison of Proposed Methods for the In Vitro Synthesis of Edible Carbohydrates** *Immobilized Enzymes in Food and Microbial Processes*  
Adams, J., L., Billingham, J., Shapira  
Plenum Press, New York.: 225–253
- **High Impact Technology** *SPS # 37-31*  
Adams, J., L.

; IV: 118-121

- **High Impact Technology** *SPS #37-35*  
Adams, J., L.  
; IV: 72-76
- **High Impact Technology** *SPS 37-33*  
Adams, J., L.  
; IV: 94-96
- **High Impact Technology** *SPS #37-32*  
Adams, J., L.  
; IV: 72-74
- **Mechanization of Capsule Spacecraft Separations** *SPS #37-31*  
Adams, J., L.  
; IV: 121-123
- **Good Products, Bad Products**  
Adams, J., L.  
McGraw Hill, New York, N.Y..2011
- **Conceptual Blockbusting**  
Adams, J., L.  
Basic Books Division of Perseus Press, New York, New York.2001
- **Flying Buttresses, Entropy, and O-Rings** *The World of an Engineer*  
Adams, J., L.  
Harvard University Press, Cambridge Mass..1991: 1
- **The Myopia of disciplines** *Techne, (Publication of Stanford University Program in Values, Technology, Science, and Society)*  
Adams, J., L.  
1989
- **Coeditor of Comunicaciones en Desarrollo de Creatividad** *Centro de Estudio en Educacion Superior y Creatividad*  
Adams, J., L.  
Universidad de Santiagode Chile.1988-91: 1
- **Big Kid's Toys-Technology as Entertainment** *Stanford Magazine*  
Adams, J., L.  
1988
- **The Care and Feeding of Ideas**  
Adams, J., L.  
Addison Wesley, Reading, Mass. .1986
- **A Four Watt Brain in a Hundred Watt World** *Architecture California, CCAIA*  
Adams, J., L.  
1985; 7 (3): 32
- **The Two Cultures, A Snow Job** *Stanford Observer*  
Adams, J., L.  
1983
- **A Call to Teach** *Stanford Engineering*  
Adams, J., L.  
1982
- **The New Liberal Arts** *Essay on education in Sloan Foundation Publication*  
Adams, J., L.

1981

- **Arts Education and Problem Solving**

Adams, J., L.  
California School Boards. 1981

- **Nothing Ventured, Nothing Gained** *Stanford Magazine*

Adams, J., L.  
1979

- **Conceptual Blockbusting** *Stanford Magazine*

Adams, J., L.  
1974

- **Invention and Innovation in the University**

Adams, J., L.  
1973

- **Measuring Change Produced by the Case Method** *Journal of Engineering Education*

Adams, J., Vesper, K.  
1972: 37-40

- **Individual and Small Group Creativity** *Journal of Engineering Education*

Adams, J., L.  
1972: 100-131

- **Air Curtain Incubator for Intensive Care Nursery** *The Journal of Pediatrics*

Adams, J., Musch, B., Sunshine, J.  
1971; 79 (6): 1024-1030

- **Moonlab- A Design for a Semi-permanent Lunar Base**

Adams, J., L., Billingham, J.  
1970

- **Teaching Objectives, Styles and Effects with the Case Method in Engineering** *Journal of Experimental Education*

Adams, J., L., Vesper, K.  
1970; 39 (2): 70-78

- **Survey of Design Education** *Journal of Engineering Education*

Adams, J., L., Essers, F.  
1970: 139-140

- **Evaluating Learning from the Case Method** *Journal of Engineering Education*

Adams, J., L., Vesper, K.  
1969: 104-196

- **Issue coordinator of Design Issue of ASEE Journal**

Adams, J., L.  
1968: 829

- **Designing for High Impact Technology**

Adams, J., L.  
1967

- **High Impact Spacecraft Equipment** *Shock and Vibration Bulletin* 35

Adams, J., L., Comuntzis, M., G.  
1966

- **Surveyor Critical Data Recorder** *JPL Section Report 355-11*

Adams, J., L., Lonborg, J.

1965: 62

- **Spacecraft Mechanical Engineering** *NASA Special Publication SP-66, 1965* "Semiannual Review of Research and Advanced Development, JPL Technical Memorandum #333-243, Contributor of several small articles  
Adams, J., L.  
1965; #1: 277 - 304
- **High Impact Spacecraft Equipment** *JPL Section Report 355-11*  
Adams, J., L, Comuntzis, J., G  
1965: 27
- **The JPL High Impact Program** *Jet Propulsion Laboratory Technical Report 32-844*  
Adams, J., L.  
1965
- **Evaluations and Recommendations Pertaining to Mariner C Honeycomb Shroud** *JPL Section Report #352-6, (Responsible for the portion analyzing the failure mode of the Mariner III shroud)*  
Adams, J., L.  
1964: 307
- **S-1B Launched Mars and Venus Orbiter Missions** *JPL Engineering Planning Document, (responsible for the configuration, structural, thermal, and mechanical portions of the document)*  
Adams, J., L.  
1962; I (139): 241
- **Seminar Proceeding, mechanical Design of Spacecraft**  
Adams, J., L.  
1962
- **An Investigation of the Effects of the Time Lag Due to Long Transmission Distances upon Remote Control Phase II and III** *NASA Technical Note D-1351*  
Adams, J., L.  
1962: 78
- **An Investigation of the Effects of the Time Lag Due to Long Transmission Distances upon Remote Control, Phase I** *NASA Technical Note D-1211*  
Adams, J., L.  
1961: 49

## PRESENTATIONS

- See "consulting", "other teaching", and "miscellaneous" on expanded resume link (<http://people.stanford.edu/jla>)