

## RESUME

ANTHONY W. THOMPSON  
2906 Forest Ave., Berkeley, CA 94705  
Home Telephone: (510) 540-6538  
Born: March 6, 1940; Burbank, California  
Married: Two Children

### Education

1970 Ph.D., M.I.T. (Metallurgy and Materials Science)  
1965 M.S., University of Washington (Metallurgy)  
1962 B.S., Stanford University (Materials Science)

### Employment

1996–2007 Research Engineer, Lecturer, Dept. Materials Science & Eng., Univ. of California, Berkeley, CA.  
1994–98 Staff Scientist, Lawrence Berkeley National Laboratory, Berkeley, CA.  
Research on mechanical properties of materials.  
1977–94 Professor, Carnegie Mellon University, Pittsburgh, PA.  
Graduate and undergraduate teaching, mechanical behavior (deformation, fracture, fracture mechanics) of metals and non-metals. Principal investigator: grants from NSF, AFOSR, NASA, DOE, AAR, DARPA. Department Head, 1987–90.  
1973–77 Member Technical Staff, Rockwell Science Center, Thousand Oaks, CA.  
Research on microstructural bases for hydrogen embrittlement and titanium alloy fatigue, and analysis of polycrystal work hardening. Program manager or principal investigator: contracts with NSF, AFML, and AFOSR.  
1970–73 Member Technical Staff, Sandia Laboratories, Livermore, CA.  
Responsible for hydrogen embrittlement aspects of engineering design. Additional research on development of austenitic alloys, general mechanical behavior.  
1962–63 Research Engineer, Jet Propulsion Laboratory, Caltech, Pasadena, CA.  
Responsible for test program on tungsten and engineering graphites.

### Professional Activities

Associate Editor (1977–83) and Editor (1983–88), *Metallurgical Transactions*.  
Member, Editorial Board, *International Metals Reviews*, 1978–85.  
Co-chairman, Gordon Research Conference (Physical Metallurgy), 1992.  
Co-organizer and Co-chair, international conferences on hydrogen in metals, held at Seven Springs, PA in 1973 and Jackson, WY in 1975, 1980, 1989, 1994 and 2002.  
Director, AAR Affiliated Laboratory at Carnegie Mellon, 1983–87.  
Head, University Research Initiative Laboratory at Carnegie Mellon, 1986–89.  
Member, Mechanical Metallurgy Committee, TMS-AIME, 1971–95 (Chairman, 1974–76).  
Member, Physical Metallurgy Committee, TMS-AIME, 1972–88 (Chairman, 1979–81).  
Member, Publications Committee, TMS-AIME, 1978–88.  
Member, R.F. Mehl Award & Lecture Committee, TMS-AIME, 1978–82 (Chairman, 1981–82).  
Member, Fellows Selection Committee, ASM Internat., 1990–93.  
Member, Faculty Senate, Carnegie Mellon Univ., 1980–82, 1984–87 (Exec. Comm., 1985–87).  
Chairman (elected), Faculty of Engineering, Carnegie Mellon Univ., 1987–88.  
External Review Committees (recent): Dept. of Mater. Sci and Min. Eng., U.C. Berkeley, 1989; Center for Advanced Matls., Lawrence Berkeley Nat. Lab., 1989; Mater. Sci. and Tech. Div., Los Alamos Nat. Lab., 1990–94, 1998–2006; Nucl. Mater. Tech. Div., Los Alamos Nat. Lab., 1990–1995.

## Honors and Distinctions

Alcoa Scholarship, Stanford University 1958–62; NASA Materials Fellowship, University of Washington, 1964–65; Case Western Reserve University Centennial Scholar, 1980; Overseas Fellow, Churchill College, and SERC Visiting Scientist, Dept. of Metallurgy and Materials Science, University of Cambridge, 1982–83; elected Fellow, ASM, 1983; Visiting Scientist, Risø National Laboratory, Roskilde, Denmark, 1987; Visiting Scientist, Air Force Materials Laboratory, Wright-Patterson AFB, 1991; Visiting Professor, University of California, Berkeley and Santa Barbara, 1991–92. Biography included in *Who's Who in America*, *Who's Who in Engineering*, *American Men and Women of Science*, *Engineering Leaders in America*.

## Presentations

Invited presentations include:

DARPA Materials Research Council, Summer Meetings, 1974–1976, 1982, 1983.

Gordon Research Conferences on Physical Metallurgy, 1975, 1981, 1985, 1989.

NATO Advanced Research Institutes, “Atomistics of Fracture,” 1981, 1986.

U.S.–China Bilateral Metallurgical Conference, Beijing, 1981.

Conference on Fracture at Stress Concentrators, Cambridge, 1984.

8th Risø International Symposium, Roskilde, 1987.

NASP Workshops on Hydrogen-Materials Interaction, Phoenix, 1988, 1990, 1991, 1992.

Conference on Rail Quality and Maintenance for Modern Railway Operations, Delft, 1992.

International Symposium on Structural Intermetallics, Seven Springs, 1993.

Symposia on Ordered Intermetallics, TMS Meeting, 1994, 1995.

Eng. Foundation Conf. on Design Issues in High Temperature Materials, Davos, 1996.

Other Presentations: In addition, about 350 other technical talks and presentations.

## Books Edited

*Hydrogen in Metals* (with I.M. Bernstein), ASM, 1974.

*Effect of Hydrogen on Behavior of Materials* (with I.M. Bernstein), AIME, 1976.

*Work Hardening in Tension and Fatigue*, AIME, 1977.

*Hydrogen Effects in Metals* (with I.M. Bernstein), TMS-AIME, 1981.

*Hydrogen Effects on Material Behavior* (with N.R. Moody), TMS-AIME, 1990.

*Modelling of Material Behavior and Design* (with J.D. Embury), TMS-AIME, 1990.

*Hydrogen Effects in Materials* (with N.R. Moody), TMS, 1996.

*Hydrogen Effects on Material Behavior and Corrosion Deformation Interactions* (with N.R. Moody, R.E. Ricker, G.S. Was and R.H. Jones), TMS, 2003.

## Research Interests

Relations between microstructure and mechanical behavior, including strength, work hardening, fatigue, creep, fracture toughness, hydrogen embrittlement, and stress corrosion cracking of structural materials.

## Principal Consulting

Sandia National Laboratories, Livermore, 1977–1998; Rocketdyne Division, Rockwell International, 1984–88; Los Alamos Nat'l. Laboratory, 1985–2006; General Electric Aircraft Engines, Cincinnati, 1988–2000; J&L Specialty Steel, Pittsburgh, 1990–93; Southern Pacific Railroad, 1994.

## Other Accomplishments

Co-author of *A Climber's Guide to the Quincy Quarries* (1968; 2nd edition, 1970); member, mountaineering expeditions to Canada (1971) and Peru (1972); organizer and editor, *Symposium on Railroad History*, 1990–1992, 1994–1996; co-author of *Pacific Fruit Express*, Central Valley Railroad Publ. (1992), Second Edition (2000); author of *Southern Pacific Freight Cars*, five volumes, Signature Press (2002–2008); President, Southern Pacific Historical and Technical Society, 1993–1998; partner in Signature Press publishing business, 1993– .

Research Publication list available on request (approximately 20 pages)