

**Department of Aeronautics and Astronautics**  
**Naval Postgraduate School**

**Faculty Vita**

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**Brij N. Agrawal**

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**Education:**

Ph.D. Mechanical Engineering, Syracuse University, 1970  
MS Mechanical Engineering, McMaster University, 1968  
ME (Hons.) Mechanical Engineering, Roorkee University, 1966  
BSc (Hons.) Mechanical Engineering, Banares University, 1964,

**Related Experience (Teaching, Industrial, etc.):**

Consulting Professor at Stanford University, California, 1992,  
Adjunct Professor at Maryland University, 1987-89  
Adjunct Professor at George Washington University, 1986-87  
International Telecommunications Satellite Organization (INTELSAT), Project Manager on several research programs, responsible for the feasibility study of INTELSAT VI and INTELSAT VII satellites and participated in their development, 1979-1989.  
COMSAT Labs, Spacecraft Laboratory Performed research and participated in the development in INTELSAT IV, COSMAR, INTELSAT V, and MARISAT satellites, 1969-1979.

**Institutional and Professional Service (Last 5 Years):**

Associate Editor, AIAA Journal of Guidance, Control, and Dynamics, 1995-97  
Chairman, AIAA Point Lobos Section, 1995  
General and Technical Chairperson of 1993 AIAA Aerospace Design Conference  
Member, International Program Committee, International Astronautical Federation  
Chairman, Attitude Control Session, IAF Congress

**Honors and Awards:**

AIAA Lockheed Graduate Team Space Design Competition Award, 1993 and 1994  
Award of Recognition for Outstanding Teaching, Naval Postgraduate School, 1993 and 2000  
Award of Recognition for Outstanding Research Performance, Naval Postgraduate School, 1992 and 1999  
INTELSAT Award for Inventiveness and Technological Contributions, 1990

**Scientific and Professional Society Membership:**

American Institute of Aeronautics and Astronautics

### **Principal Publications (Last 5 Years):**

- Song, G, Schmidt, S.P. and Agrawal, B.N., "Active Vibration Suppression of a Flexible Structure Using Smart Materials and Modular Control Patch," *Proceeding of Institution of Mechanical Engineers*, vol. 214, Part G, 2000.
- Song, G., Kelly, B. and Agrawal, B.N., "Active Position Control of a Shape Memory Alloy Wire Actuated Composite Beam", *Journal of Smart Materials and Structures*, vol. 9, 2000, pp.711-716.
- Agrawal, B.N. and Treanor, K., "Shape Control of a Beam Using Piezoelectric Actuators," *The Journal of Smart Materials & Structures*, vol. 8, 1999, pp. 729-740.
- Song, G., Buck, N. and Agrawal, B.N., "Spacecraft Vibration Reduction Using Pulse-Width Pulse-Frequency Modulate Input Shape," *AIAA Journal of Guidance, Control, and Dynamics*, vol. 22, no. 3, 1999, pp. 433-444.
- Meyer, J., Harrington, W., Agrawal, B.N. and Song, G., "Vibration Suppression of a Spacecraft Flexible Appendages Using Smart Materials," *The Journal of Smart Materials and Structures*, vol. 7, 1998, pp. 95-104.
- Agrawal, B.N., Elshateri, M.A. and Song, G., "Adaptive Antenna Shape Control," *IAF Acta Astronautics Journal*, Vol. 40, No. 11, 1997, pp. 821-826.
- Agrawal, B.N. and Bang, H., "Robust Closed-loop Control Design for Spacecraft Slew Maneuver Using Thrusters," *AIAA Journal of Guidance, Control, and Dynamics*, vol. 18, no. 6, pp. 1336-1344. Nov-Dec 1995.
- Agrawal, B.N., McClelland, R. and Song, G., "Attitude Control of Flexible Spacecraft Using Pulse-Width Frequency Modulated Thrusters," *Space Technology Journal*, Vol. 17, No. 1, pp. 15-34, 1997.
- Agrawal, B.N., "Adaptive Structures for Large Precision Antenna," *ACTA Astronautica*, vol. 38, no. 3, pp. 175-183, 1996.
- Agrawal, B.N., "Spacecraft Vibration Suppression Using Smart Structures," *Fourth International Congress on Sound and Vibration*, pp. 563-570, June 24-27, 1996.