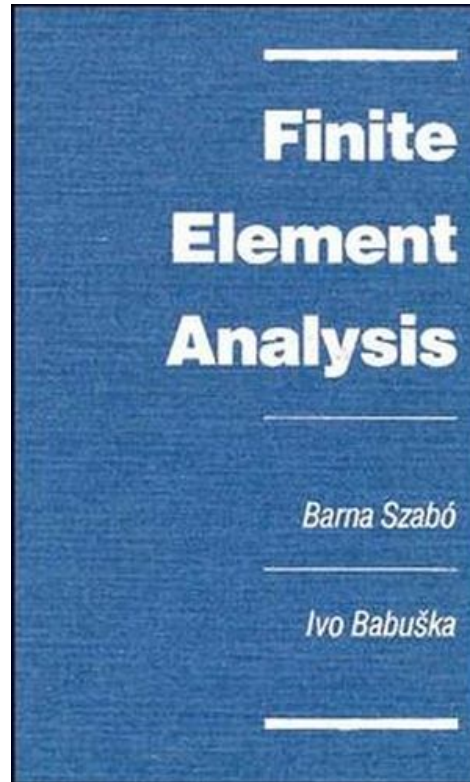




**Professor Barna A. Szabó**



B. A. Szabó and I. Babuška, *The Finite Element Method*, John Wiley & Sons, New York, 1991

See:

<https://research.engineering.wustl.edu/~szabob/>

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### **Biography:**

Prior to his retirement from full-time work at Washington University in 2006, Barna Szabó served as the Albert P. and Blanche Y. Greensfelder Professor of Mechanics. His primary research interest is assurance of the quality and reliability in numerical simulation of structural and mechanical systems by the finite element method. He is the principal author of two textbooks on the finite element method and he published over 150 papers in refereed technical journals. He is a founding member and Fellow of the US Association for Computational Mechanics. Among his honors are election to the Hungarian Academy of Sciences as External Member and an honorary doctorate. Barna Szabó is co-founder and Chairman of Engineering Software Research and Development, Inc. (ESRD), the company that produces the professional finite element analysis software product StressCheck

### **Education:**

B.A.Sc., University of Toronto (1962)  
M.S., State University of New York at Buffalo (1966)  
Ph.D., State University of New York at Buffalo (1968)

**Career:**

1968-present: Washington University, St. Louis, Missouri. (1968: Assistant Professor; 1969: Associate Professor; 1974: Professor; 1975-2006 The Albert P. and Blanche Y. Greensfelder Professor of Mechanics; 1977-1992: Director, Center for Computational Mechanics.)  
1966-1968 State University of New York at Buffalo, Buffalo, New York (Instructor of Engineering and Applied Science.)  
1962-1966 H. G. Acres Limited, Niagara Falls, Canada (1962: engineer, applied mechanics; 1966 consulting engineer.)  
1960-1962 The International Nickel Company of Canada Limited, Thompson, Manitoba, Canada (mining engineer.)

**Selected Publications:****Books:**

B. A. Szabó and I. Babuška, *The Finite Element Method*, John Wiley & Sons, New York, 1991.  
B. A. Szabó and I. Babuška, *Introduction to Finite Element Analysis. Formulation, Verification and Validation*. John Wiley & Sons Ltd., Chichester, 2011. Chinese translation: 2013.

**Journal Articles, etc:**

I. Babuška, B. A. Szabó and I. N. Katz, The p-version of the finite element method. *SIAM J. Numer. Anal.*, 18 (1981) 515-545.  
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I. Babuška, B. A. Szabó and R. L. Actis, "Hierarchic Models for Laminated Composites", *Int. J. Numer. Meth. Engng.*, 33, (1992), 503-535.  
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- B. Szabó, A. Duster, E. Rank, The p-version of the finite element method, in: E. Stein, R. de Borst, T.J.R. Hughes (Eds.), *Fundamentals, Encyclopedia of Computational Mechanics*, vol. 1, Wiley, New York, 2004 (Chapter 5).
- B. A. Szabó and D. Muntges, “Procedures for the verification and validation of working models for structural shells”, *Journal of Applied Mechanics* 72, (2005), 907-915.
- J. Pitkäranta, I. Babuška, and B. A. Szabó, "The dome and the ring: Verification of an old mathematical model for the design of a stiffened shell roof." *Computers & Mathematics with Applications* 64(1) (2012), 48-72.
- B. A. Szabó, “Unidirectional fiber-reinforced composite laminae: Homogenization and localization”, *Computers and Mathematics with Applications*, 70 (2015) 1676 – 1684. DOI: 10.1016/j.camwa.2015.02.015.