

BIOGRAPHICAL SKETCH OF ZDENĚK P. BAŽANT

a) Professional Preparation

C.E. (Civil Engineer), Czech Techn. Univ. Prague (CTU) Prague (1st in class), 1960.

Ph.D. in Engineering Mechanics, Czechoslovak Academy of Sciences Prague, 1963.

Postgraduate Diploma in Theoretical Physics, Charles University, Prague, 1966.

Docent habilitatis in Concrete Structures, CTU Prague, 1967.

b) Appointments

McCormick School Professor (a chair held simultaneously with Murphy chair), 2002–.

W.P. Murphy Professor of Civil Engrg. and Materials Science, Northw. Univ., 1990–.

Director, Center for Geomaterials, Northwestern University, 1981–87.

Professor 1973–90, *Associate Professor* 1969–73, of Civil Engineering, Northwestern University, 1973–90.

Associate Research Engineer, University of California, Berkeley, 1968–69.

Research Fellow, University of Toronto, 1967–68.

Visiting Scientist, CEBTP Paris, 1996–97.

Scientist, Adjunct Assistant Professor, Czech Technical University, Prague, 1964–67.

Bridge Engineer, Dopravoprojekt, Prague, Jan. 1961–Dec. 1963.

OTHER: *President*, Soc. of Engrg. Science, 1993; *President* (Founding), Intern. Assoc. for Fracture Mechanics of Concrete Structures (IA-FraMCoS), 1991–93; *Honorary president* 2004–. *Chairman*, Division H, PC Reactor Vessels, Intern. Assoc. for Struct. Mech. in Reactor Technology (SMiRT), 1981–94; *Chairman*, ACI Comm. 446, Fracture Mechanics, 1985–92; *Chairman*, ASCE-EMD Comm. on Properties of Materials, 1975–77, 1981–83; *Chairman*, RILEM Comm. on Creep & Shrinkage, 1988–2000; *Chairman*, RILEM Comm. QFS, Quasibrittle Fracture Scaling, 1994–05; *Chairman*, RILEM Comm. TC-MDC, Multi-Decade Creep, 2010–.

Editorships: *Editor (in-Chief)*, Jour. of Engrg. Mech., ASCE, 1988–94. *Regional Editor*, Int. J. of Fracture, 1991–. About 30 Editorial Boards 1971–.

HONORS:

Member: National Academy of Sciences, 2002–
Member, National Academy of Engrg., 1996–
Fellow, American Academy of Arts and Sciences. 2008–

Foreign Member: 1) Austrian Academy of Sciences, 2000–; 2) Italian Nat. Academy (dei Lincei), 2007–; 3) Spanish Royal Acad. of Eng., 2008–; 4) Academy of Engrg. of Czech Rep., 1998–; 5) Eur. Acad. of Sciences & Arts. 2008–; 6) Academia di Scienze e Lettere, Milan 2002–;

7 Honorary Doctorates: 1) Univ. of Colorado, Boulder 2000, 2) Politecnico di Milano 2001, 3) Techn. Univ. Vienna 2005, 4) INSA Lyon, France, 2004, 5) Karlsruhe University, Germany 1997, 6) Czech Techn. University, Prague 1991; 7) Ohio State University, Columbus, Dec. 2011.

2009 *Timoshenko Medal*, ASME;

1996 *Prager Medal*, Soc. of Engrg. Science;

2008 *Nadai Medal*, ASME;

1997 *W.R. Warner Medal*, ASME;

2005 *von Karman Medal*, ASCE;

1996 *Newmark Medal*, ASCE;

2011 *Biot Medal*, ASCE;

2004 *Lifetime Achievement Award*, Ill. Str. Eng. Sec. ASCE;

2007 *Honorary Mem.* ASCE;

2011 *Honorary Member* ACI;

1997 *Croes Medal*, ASCE;

1990 *Torroja Gold Medal*, Building Res. Inst. of Spain;

1975 *L'Hermite Medal*, RILEM (Paris);

1993 *Medal of Merit*, Czech Soc. for Mechanics, Prague;

1998& 2007 *Šolín Medal & Bažant, Sr. Medal*, Czech Techn. Univ., Prague;

1999 *Stodola Gold Medal*, Slovak Academy of Sciences, Bratislava;

2001 *D.M. Roy Award*, Am. Ceramic Society;

2001 *ICOSSAR Lecture Award*, Int. Assoc. for Structural Safety and Reliability;

1977 *T. Y. Lin Award* ASCE;

1976 *W.L. Huber Civil Engrg. Research Prize*, ASCE;

1992 *Meritorious Publication Award*, Struct. Engrs. Assoc. of Ill.;

1992 *Best Engrg. Book of the Year Award*, Assoc. of Am. Publishers;

1984 *Scientific and Technical Prize*, PR China;

2001 *ISI Award of "Highly Cited Scientist in Engrg."* (one of the original top 100), Int. Sci. Index, Inc.;

1991 *Gov. Lectureship Award*, China–Taiwan;

1955 *National Winner*, Mathematical Olympics,

Czechoslovakia; etc.

Elected Fellow: SES, AAM, ASME, ASCE, RILEM, ACI, USNACM.

Fellowships: Guggenheim 1978, NATO 1988, Humboldt 1990, JSPS Tokyo 1996, Kajima Tokyo 1987; Ford Found. 1967.

2011 *Z.P. Bazant Prize in Engrg. Mechanics* instituted by the Czech Soc. for Mechanics, Prague (selection comm. joint with CTU and Czech Acad. Sci.)

c) Five Selected Publications

Total > 530 refereed journal articles since 1958.

Selected five related recent publications:

Bažant, Z.P., and Pang, S.-D. (2006). "Mechanics based statistics of failure risk of quasibrittle structures and size effect on safety factors." *Proc., Nat. Academy of Sciences* 103(25), 9434–9439.

2004 Bažant, Z.P. (2004). "Scaling theory for quasibrittle structural failure." *Proc., National Academy of Sciences* 101 (37), 13397–13399.

2007 Bažant, Z.P., and Pang, S.-D. (2007). "Activation energy based extreme value statistics and size effect in brittle and quasibrittle fracture". *J. of the Mechanics and Physics of Solids* 55, 91–134.

2005 Bažant, Z.P. *Scaling of structural strength*, 2nd ed. Elsevier, London (327 pp.).

1998 Bažant, Z.P. & J. Planas, J.. *Fracture and Size Effect*. CRC Press, Boca Raton (616 pp.).

Selected five other publications:

2002 Jirásek, M. & Bažant, Z.P. *Inelastic Analysis of Structures*. J. Wiley & Sons (735 pp.).

1991 Bažant, Z.P., and Cedolin, L.. *Stability of Structures: Elastic, Inelastic, Fracture and Damage Theories*. Oxford University Press, New York (984 pp.).

1984 Bažant, Z.P. "Size effect in blunt fracture: Concrete, rock, metal." *J. of Engrg. Mechanics, ASCE*, 110 (4), 518–535.

2008 Bažant, Z.P., Le, J.-L., Greening, F.R., and Benson, D.B. (2008). "What did and did not cause collapse of World Trade Center twin towers in New York?". *J. of Engrg. Mechanics ASCE* 134 (10) 892–906.

ISI Award of *Highly Cited Scientist* in Engrg. (top 100, all fields), 2002;

H-index = 60, Total citations > 17,000
(on Google Scholar, by Aug. 2011).