Resume for Timothy F. Havel

BRIEF BIOGRAPHY: Tim Havel received his BA in Chemistry from Reed College in 1975, and his PhD in Biophysics from the Univ. of California Berkeley in 1982. During his postdoctoral work at the Swiss Federal Technical Institute in Zürich, Switzerland he was responsible for computing the first protein structure to be determined by NMR spectroscopy. He subsequently held positions at the Scripps Research Foundation in La Jolla, California, the University of Michigan in Ann Arbor, the Harvard Medical School in Boston. In 2000 he joined the Dept. of Nuclear Science and Engineering at MIT, where he helped demonstrate the first prototypes of quantum computers by means of NMR. In 2005 he joined the MIT Sloan Fellows program, where he obtained his SM in the Management of Technology in June 2007. His thesis, "Towards an Industrial Ecosystem for Power MEMS," studied the feasibility of a technology roadmap in top-down nanotechnology applied to energy systems. From October 2007 through October 2008 he served as a Research Associate in the Center for Technology, Planning and Industrial Development, where he assisted with an economic study of semiconductor manufacturing. He is presently a long-term visitor at the Institute for Mathematics and Its Applications at the University of Minnesota.

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INTERESTS:

- Nanotechnology, both top-down and bottom-up
- Computational chemistry and scientific computing
- Management of challenging long-term R&D projects
- Assessing the strategic value of novel technologies
- Capturing the value of technological innovations

ACCOMPLISHMENTS:

- Over 100 publications in the scientific literature on biochemistry, biophysics, quantum mechanics, computer science and applied mathematics (complete list available on above web site)
- Developed programs and performed computations for the structure of the first protein to be determined in its native solution state from 2D NMR data (1984)

- Developed computational engine behind four products marketed by Accelrys Inc. for protein structure determination and drug design (1990 - present)
- Served as Principal Investigator on 15 grants from National Science Foundation, National Institutes of Health, and Defense Advanced Research Projects Agency (1987-2005)
- Served as Managing Investigator on Cambridge-MIT Institute grant for the support of Quantum Information Science and Technology (2001-2006)
- Served as Managing Editor for Springer journal, Quantum Information Processing (2001-2007)

PAST EMPLOYMENT:

2007 – 2008	Research Associate, Center for Technology, Policy and Industrial Development @ MIT
2000 – 2007	Principal Research Scientist, Dept. of Nuclear Science & Engineering @ MIT
1990 – 2000	Lecturer, Department of Molecular Pharmacology and Biological Chemistry, The Harvard Medical School, Boston, MA, USA
1988 – 1990	Research Scientist, Biophysics Research Division, The University of Michigan, Ann Arbor, MI, USA
1985 – 1988	Assistant Member, Department of Molecular Biology, The Scripps Research Institute, La Jolla, CA, USA

EDUCATION:

2007 SM in the Management of Technology from the MIT Sloan Fellows Program: a one-year full-time / two-year half-time program leading to an MBA or SM in Management for experienced executives, entrepreneurs and engineers

1985 Finished one year of postdoctoral study with Prof. Andreas Dress, Fakultät für Mathematik, Universität Bielefeld, Bielefeld, Germany

1984 Finished two years of postdoctoral study with Prof. Kurt Wüthrich, Institut für Molekularbiologie und Biophysik, Eidgenössische Technische Hochschule, Zürich, Switzerland

1982 Received Doctoral Degree in Biophysics from the University of California, Berkeley; advisors: Profs. Irwin Kuntz & Gordon Crippen

1975 Received Bachelors Degree in Chemistry from Reed College, Portland, OR

PERSONAL DETAILS: Male, 55 years old, married, no children;
Citizenship: United States of America