

# Paul Michael Grant

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**Objective/Goal**      **To assist industry, government and media clients in the evaluation and assessment of emerging science and technology and its potential for application in the energy and information processing enterprises.**

**Education**                      **PhD, Applied Physics, Harvard** (Final Academic Degree)

**Professional experience and qualifications**      2004 - Present                      [W2AGZ Technologies](http://www.w2agz.com)                      San Jose, CA  
**Principal**

W2AGZ Technologies was formed in late 2003 as a consultancy framework to carry out the objectives and goals stated above. Please visit <http://www.w2agz.com> for more information.

- Current activities are:
  - ◇ Ongoing Formulation of the [SuperGrid Vision](#).
  - ◇ Reviewer of the DOE and DOD program on power applications of superconductivity.
  - ◇ Employing modern computational physics to explore pathways to room temperature superconductivity.

2005 – 2008                      Stanford University                      Palo Alto, CA  
**Visiting Scholar in Applied Physics**

Investigating density functional and band structure methods as search tools for meta-stable phases of copper monoxides.

1993 - 2004                      EPRI                      Palo Alto, CA  
**Science Fellow** (Final Position)

- Conduct "Future Watch" on emerging energy science and technology on behalf of electric utilities and EPRI executives.
- Help structure EPRI's \$38 M Strategic Science and Technology program.
- EPRI media spokesperson on energy science issues.

1953 - 1993                      IBM Corporation                      Armonk, NY  
**Research Staff Member** (Final Position)

- Bowling alley pin setter and mail boy in IBM Poughkeepsie facilities
- Technician/programmer on forerunner to NORAD system, IBM/MIT
- Sent to Clarkson University on IBM program to obtain BS in Electrical Engineering, Summa Cum Laude

- Sent to Harvard University on IBM program to obtain AM, PhD degrees in Applied Physics
- Researched optical properties on magnetic semiconductors, pioneered early efforts in computer data acquisition and control at IBM Research, San Jose
- Staff assignment, Materials and Manufacturing Technology Center, IBM Research, San Jose
- Co-founded internationally respected research effort on organic and polymer conductors and superconductors at IBM San Jose Research Laboratory
- Staff assignment, Vice President for Storage and I/O Technology, responsible for basic science strategy development and display and printer technology programs at IBM San Jose Research Laboratory
- Led effort to formulate and then manage group to investigate exchange-biased magnetoresistance effect which resulted in IBM's magnetoresistive head and "giant magnetoresistive" head storage technology used worldwide today
- Organized and led IBM San Jose/Almaden effort in high temperature superconductivity, discovered five new superconducting materials, including structure of the first superconductor above liquid nitrogen and the world record Tl-2223 125 K material until 1994
- IBM Visiting Professor of Materials Science, National University of Mexico, UNAM

***Patents and publications***

- Over 120 publications in peer reviewed literature
- Over 45 editorials, popular articles, commentaries and book reviews
- 10 patents and patent publications

(details available at <http://www.w2agz.com>)

***Awards received***

- Elected Fellow, Institute of Physics (UK), 1999
- Physics Today 50<sup>th</sup> Anniversary Essay Prize, 1999
- Elected Senior Life Fellow, American Physical Society, 1998
- Nature Magazine "Scientist as Science Writer" Award, 1994
- More than eight other awards from IBM, EPRI and the Mexican Government, details available at <http://www.w2agz.com>

***Sample professional activities***

- Science Advisory Board, Texas Center for Superconductivity at the University of Houston, 1997 – 2002
- Board of Directors, Council on Superconductivity for American Competitiveness, 1996 – 2002
- More than 20 other professional activities, memberships and participations, details available at <http://www.w2agz.com>

***Interests and activities***

69 years skiing recreationally and on mountain rescue organizations. Several awards and certifications for avalanche control and paramedic accreditation. Exploring the history of the discovery of high temperature superconductivity.