

# David Fanning

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## Summary

A love of language and writing, a passion for physical and natural sciences, and a strong entrepreneurial mind-set have combined to create a 25-year career in communicating technical information to the widest possible audience.

## Education

**English Major**, Arizona State University, 1969-1972

**B.S. in Physics**, Colorado State University, 1981 (4.0 grade average in major)

**Ph.D. in Biological Chemistry**, The Pennsylvania State University, 1986

## Professional and Technical Experience

### **Fanning Software Consulting, Inc. (1997 - present)**

- Worldwide IDL consulting and training business. (IDL is a programming language used by scientists to analyze and visualize large data sets and images.)
- Programming clients include: Johnson & Johnson Consumer Products Division, Shell Research and Exploration, Segami Corporation (medical imaging), Sunnybrook and Women's Hospital, Sandia National Laboratory, European Southern Observatory, Hofstra and Stanford Universities, GSF-Forschungszentrum (Munich), Max-Planck Institute of Meteorology, and the Air Force Meteorological Branch
- Author of *IDL Programming Techniques, 1st and 2nd Editions*, ISBN 096623832X. Best selling IDL book on the market with nearly 5000 copies sold
- Teach beginning, intermediate, and advanced IDL courses worldwide, including in Norway, England, Denmark, Germany, Spain, Japan, Australia, Canada, and the United States.
- Develop, write, and maintain *Coyote's Guide to IDL Programming* web page, the leading web site for IDL programmers and application developers with over 300 technical articles, 75 example IDL programs, and over 2000 downloads daily.
- Recognized IDL expert in the IDL programming and newsgroup community, I spend up to two hours a day answering IDL questions pro bono as a service to the IDL community
- Specialize in writing interactive and object-oriented IDL applications and programs
- Developed *Catalyst Library*, an object-oriented framework for building IDL applications and used it to build an satellite observation system for the Air Force Meteorological Branch
- Currently working on the 3rd edition of *IDL Programming Techniques*

### **Freelance Science Radio Producer (on-going)**

- Produce science feature stories for general audiences for KUNC radio (an NPR affiliate)

### **Director of Training, Research Systems, Inc. (1994 - 1997)**

- Saw the need for and initiated an IDL training program at RSI
- Conceived, developed, wrote and taught beginning, intermediate, and advanced IDL course curriculum. Helped develop ENVI course curriculum and materials.
- Wrote *Beginning IDL Programming*, and *Intermediate IDL Programming* course manuals which are still the basis for courses today
- Marketed and sold IDL courses, raising training revenues from \$0K to \$450K in 3 years

**Technical Sales, Research Systems, Inc. (1993)**

- First ever IDL technical sales person
- Raised sales revenue 35% in one year.
- Called on customers to demonstrate and offer pre-sales technical support

**Independent Consultant, IMSL (1992)**

- Produced video script and promotional/marketing materials for new IMSL-IDL product
- Developed training course for new IMSL-IDL product

**Technical Support Engineer, Precision Visuals, Inc. (1989-1991)**

- Primarily responsible for answering PV-Wave (IDL) questions from customers
- Offered pre-sales technical support and demos to sales staff and customers
- Conceived and developed “No Engineers Allowed” seminars to explain our products to non-technical support staff and employees
- Became senior support engineer, responsible for advanced PV-Wave technical questions

**Technical Writer, Precision Visuals, Inc. (1988-1989)**

- On team of five people responsible for turning IDL into the PV-Wave software product
- Solely responsible for converting and augmenting the IDL User and Reference Guides to PV-Wave use
- Developed Quick Reference Guide format and product for customer use
- Worked with marketing department to develop technical marketing materials

**Groundwater Specialist, Environmental Defense Fund (1987)**

- Researched groundwater contamination problems in Colorado
- Wrote reports, lobbied government organizations, and had a public speaking role

**Freelance Science Writer (1986-1993)**

- Sold small articles on scientific or technical topics to newspapers and science magazines
- Major projects include white-paper on the risks of releasing genetically engineered organisms into the environment and a two-part series on Arkansas River water quality

**Adjunct Professor of Physics, Harrisburg Community College (1986)**

- Taught first-year physics course, learned I had talent for explaining technical subjects

**Scientific Illustrator, Self-Employed (1979-1980)**

- Produced scientific illustrations for journal articles, slide shows, and poster presentations, primarily using ink on vellum paper
- Produced all illustrations for textbook, *Chemical Equilibria in Soil*, by Willard Lindsay.

**Research Technician, Colorado State University, Agronomy Dept. (1976-1978)**

- Isolated and analyzed heavy metal concentrations in soil and crop samples
- Used gas chromatograph, mass spectroscopy, and other analytical instruments
- Created all scientific illustrations used in the lab for journal articles, posters, etc.

**Awards****American Association for the Advancement of Science Media Fellowship (1986)**

- Produced science programs for KUNC Public Radio in Greeley, CO

## Related Communication Interests

### Professional Storyteller (1994-2000)

- Performed before local groups. Specialized in coyote stories.
- Innovative introduction of stories and music into IDL programming courses

### Noonshiners Toastmasters (1993-1994)

- Completed CTM course designed to enhance public meeting and presentation skills

### Actor (1976-1981)

- Work with OpenStage Theater, CSU Theater, and Foothills Civic Theater

## Computer Languages and Software

- **IDL** (Interactive Data Language for scientific analysis and visualization)
- **FORTRAN, C, JAVA**
- **HTML, CCS, and JavaScript** for developing web pages
- **Adobe Distiller, Acrobat, Photoshop, and Framemaker** for producing books and marketing materials
- **Microsoft Office Suite (Word, Excel, Powerpoint)**
- Familiar with **UNIX, LINUX, Microsoft, and Macintosh** operating systems and tools

## Publication List

- “Algorithmic Identification of Antigenic Determinants in Proteins of Known Structure,” David W. Fanning and George D. Rose, in *Peptides: Structure and Function*, Proceedings of the Ninth American Peptide Symposium. (1985)
- “Molecular Cartography of Globular Proteins with Application to Antigenic Sites,” David W. Fanning, John A. Smith, and George D. Rose, *Biopolymers*, Vol 25, 863-883 (1986)
- “Antigenic Determinants in Proteins Coincide with Surface Regions Accessible to Large Probes (Antibody Domains),” Jiri Novotny, Mark Handschumacher, Edgar Haber, Robert E. Bruccoleri, William B. Carson, David W. Fanning, John. A. Smith, and George D. Rose, in *Proceedings of the National Academy of Sciences*, Vol. 83, pp. 226-230, January 1986.
- *Environmental Release of Genetically Engineered Organisms: A Keystone Biotechnology Discussion Paper*, David W. Fanning, The Keystone Center, Keystone, CO 80435. Feb 26, 1988.
- “Bleeding from a Million Wounds,” and “Pollution, Pollution Everywhere and Not...,” David Fanning, High Country News, Vol.21, No. 22, Nov. 20, 1989. (Reprinted in *Water in the West*, by High Country News, 1993.)
- *IDL Programming Techniques*, David W. Fanning, FSC, ISBN 0966238303, 1996.
- *IDL Programming Techniques, 2nd Edition*, David W. Fanning, FSC, ISBN 096623832X, 2000.
- “Andechs Monastery: A Spiritual Journey,” BootsNAll Travel Network, (<http://www.bootsnall.com/articles/05-06/andechs-monastery-a-spiritual-journey-munich-germany.html>), July 2005.
- “Coyote’s Excellent München Adventures,” David W. Fanning, travel essays available on the Internet at <http://www.dfanning.com/adventures/munich/index.html>, July 2005.