

## **Gordon Berry**

### **Brief Biographical sketch**

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email: [hgb@att.net](mailto:hgb@att.net); Family website: <http://ndchicago.net>  
**Born:** July 25, 1940, in Huddersfield, England; Citizenship: British; American (since March 22, 1988)  
**Married to** Mary Hynes-Berry, with four sons: Geb, Sebastien, Nicolas, Daniel.

**Work:** Professor (since 1994) in the Department of Physics, University of Notre Dame, Notre Dame IN 46556 tel. (574) 631-4012, Fax: -5952;

email: [HGBerry@nd.edu](mailto:HGBerry@nd.edu) Work Website: <http://www.nd.edu/~hgberry/berry1.html>

**Degrees** (in Physics)    Ph.D.    University of Wisconsin, Madison - August 1967  
                                  M.Sc.    University of Wisconsin, Madison - June 1963  
                                  B.A.    Oxford University, (University College) England - August 1962

**Publications:** Editor of eight conference proceedings; more than 190 publications in physics journals, principally in the field of atomic spectroscopy – complete listing given at the website:

### **Education Activity and Research**

Besides being a scientist engaged primarily in research and in teaching at the College level, I have a fundamental interest in the quality of the U.S. Public schools - my 4 sons went to the Chicago Public Schools (CPS), and my wife has participated in programs for the CPS for at least 30 years. A strike of Chicago teachers in 1987 brought a crisis to a head in the CPS, resulting in a strong parent reaction, and a consequent complete reform of the administrative system: an important result was the development of Local School Councils and more autonomy of the individual community schools. Following more than a year of being involved in writing the Chicago School Reform Proposals in Springfield, IL, four of us (Drs. Leon Lederman, Henry and Priscilla Frisch and myself) set out to develop the **Academy for Mathematics and Science Teachers**, Chicago (now TAMS). After a process of incorporation which involved the inclusion and the expertise of many of Chicago's educational institutions, CPS teachers, principals and parents, the Academy was formed June of 1990-91. I was its first acting Director. This Academy has a proven record of improving science and mathematics instruction (more than 100 schools in all) in the Chicago Public Schools, and in schools in East St. Louis IL and in Aurora IL. It was recently (2005) incorporated into the Chicago Public School administrative structure.

In the field of pre-college education, I have viewed myself as a facilitator, developer and organizer, rather than as an expert in learning and teaching techniques. However, the guided inquiry experiential process of learning has always been one which I try to apply both within the college classroom, and in the understanding of science in our community. The community of St. Joseph County, Indiana is typical of many counties across the U.S.A in including within approximately a quarter million people, experts in almost all fields of endeavor, and with institutions of higher learning, businesses, hospitals and other institutions that can contribute far more than they already do to support their local community. The logical processes involved in STEM learning are vital to the development of modern effective and successful communities - if we can do even a small part in transferring ideas, excitement and understanding the needs, it is our rewarding duty to do so.

### **More Recent work in K-12 Education**

**2004:** Founder of NISMEC - the Northern Indiana Science Mathematics and Engineering Collaborative - a collaboration of local higher-ed institutions (Notre Dame, Saint Marys and IUSB), the St. Joseph County schools (public and private) and other local educational institutions.

(<http://www.nd.edu/~nismec/nismec11.htm>) **Editor of newsletters, 2005 - present.**

**2005:** Consultant with Mishawaka School City for a IN-DOE Math-Science Partnership Grant ***Inquiry Learning for Students and Teachers*** 2005-2008, 3 years, \$450K.  
Director of a 4 week summer workshop: *Guided Inquiry in Science and Mathematics for Middle School Teachers at Notre Dame*, Summer 2005, financed by the Siemens Foundation and the University of Notre Dame, and the Murgatroyd Science Foundation.

**2006:** HASTI (Hoosier Association of Science Teachers of Indiana) Feb 2006 annual meeting workshop: *Introduction of PIPS (Powerful Ideas In Physics) using GUIDED INQUIRY*, with K. Mikel.  
(also GI several papers presented at HASTI in 2007 and 2008, Indianapolis).

**2006:** Director of 2 week summer workshop: shortened version of the 2005 summer workshop (financed by the Siemens Foundation and the University of Notre Dame, and the Murgatroyd Science Foundation).

**2007:** Director of 2 week summer workshop: *MS-Squared – Math and Science for Middle School Teachers Workshop on Guided Inquiry*, summer 2007 at Notre Dame, financed by I-STEM (the Indiana Science, Technology, Engineering and Mathematics network) and by the Siemens Foundation.

**2007** January NISMEC, becomes the Northern Indiana Hub for I-STEM.  
<http://www.istemnetwork.org/index.cfm> .

**2007** April I-STEM — appointed to the 10 member Policy Board.

**2007** October to present – Director of **HOST** – Hands-On Science & Technology Center - [http://nd.edu/~hgberry/host/sapc\\_host.htm](http://nd.edu/~hgberry/host/sapc_host.htm)) for the St. Joseph County area – development ongoing.

**2008** February – Rewrote the “Core-40 High School Science Standards” for the Indiana Department of Education.

**2008** April: co-organizer of IUSB Community Conference *“The Next Step in Math and Science Education: Our Community's Future”*, (April 18th)

**2008** April: co-organizer of I-STEM/Indiana DOE First Annual Indiana *“Building Awareness for Science Education”* Symposium (April 25th)

**2008** June and July: co-organizer of 3 workshops for the professional development of Middle school teachers (from South Bend, Mishawaka and PHM schools) at the University of Notre Dame and Saint Mary’s College.

**2008 August:** appointed to the State Board committee to review the Indiana Science Standards.