

**2008 Scholarly, Teaching and Service Accomplishments  
University of Notre Dame  
College of Science  
Department of Physics**

Name	Title
Berry, H. Gordon	Professor

If non-applicable, insert N/A

2008 Scholarly Publications	Total: 0
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*Insert full citation record (title, journal name, volume, page numbers, year, list of authors). Citations do not have to be in this order. Include only papers published in 2008. Do not include papers in submission or in press.*

2008 Outside Seminars/Colloquium	Total:
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*Insert full citation (title, organization name, department, location, date) of seminars/colloquium that you have presented*

1. 6-8 Feb 2008 HASTI annual meeting (Hoosier Association of Science Teachers, Inc.)
  - (a) contributed talks
    - (i) Integrating Middle-School Math and Science using Guided Inquiry – I – math using science
    - (ii) Integrating Middle-School Math and Science using Guided Inquiry – II – science using math
    - (iii) Getting the Most Out of Mangoes
  - (b) A joint booth for 3 days at HASTI for NISMEC, jointly with Quarknet, JINA and Saint Mary's College TSI.
  
2. April 17, 2008: "Next Step in Science and Math Education" Conference at IUSB - Organizer of conference, speaker in workshop on "State of Indiana developments and support for science learning methods"
  
3. April 24, 2008: "Building Alliances" Symposium, Indianapolis - Organizer of conference, facilitator in workshop on "Guided Inquiry in Science"
  
4. April 4-5 Walter Johnson Symposium at Notre Dame - Organizer of conference, speaker on "Doubly-excited States in oxygen, with Bin Lin.

2008 Conference/Meeting Presentations	Total:
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*Insert full citation (title, organization name, department, location, date) of presentations that you have presented*

**2008 Awards / Honors / Special Achievements / Professional Distinctions**

*Insert name of award/honor, location of presentation, and recognition*

**2008 Grant Submissions**

**Total #:  
Total \$:**

*Insert information on grant applications (title, agency, amount, duration, PI, CoPIs)*

HOST: A Hands-On Science and Technology Center for STEM Learning, NSF, \$1,117,485, 36 months, PI: Berry  
 Modern Technology Support for Middle School Science Teachers Partnership, Indiana Commission of Higher Education, \$172,165, 24 months, PI: Berry, Co-PI: Sakimoto

**2008 Grant Awards**

**Total #:  
Total \$:**

*Insert information on grant applications (title, agency, amount, duration, PI, CoPIs)*

I-STEM Support of the NISMEC Outreach Program, Siemens (via Purdue), \$99,000, 24 months, PI: Berry

**Ongoing Grants Managed in 2008**

**Total:**

*List the ongoing grants that you managed in 2008 and scale/size (# students, funding level, etc.)*

Supervision of Research Personnel	Name	Duration in your program	Funded/Unfunded/ (identify course credit)	Total #
<b>Undergraduates</b>	Whitney Currier (Summer 2008 REU Student)			
<b>Graduate Ph.D. Students</b>				
<b>Postdoctoral Fellows</b>				
<b>Technicians and Other Personnel</b>				

### Accomplishments/Awards/Honors Received by Research Personnel

*(e.g. awards, honors, publications, accomplishments, etc.)*

#### 2008 Ph.D. Graduates / Finishing Postdocs

#### New Position (Placement)

#### Courses Taught

#### Semester

#### Spring (Q17 & Q15) Fall (Q11 & Q14)

PHYS 20330 General Physics III  
PHYS 31220 Laboratory II  
PHYS 80301 Atomic Physics I

Spring 2008  
Fall 2008  
Fall 2008

*Note: Teacher Evaluations changed in the  
Fall of 2008*

2.15, 1.69  
3, 3.8  
2.3, 3.1

*Comments on Teaching (teaching innovations, new pedagogy approaches, new experiences offered to students, implementation of new computational tools, projects, etc.):*

#### Service to Profession

*Service to professional societies, committee assignments, conference organization, etc.:*

1. Member of the Indiana Committee to reform science education in the Indiana Schools (sponsored by the Governor, the Indiana Department of Education, and I-STEM).  
The principal activity in 2008 was a conference Building Alliances...
2. Member of the Science Standards Committee of the Indiana Department of Education:  
several meetings throughout the year to develop the revised standards, due to be published in the summer of 2009.
3. Member of the I-STEM/INDOE Science curriculum development committee: several meetings during the year -  
primary goal: to revise the state policies and directives for curriculum adoption in K-12 schools - science adoption year is 2010.

### Service to University

*Committees, projects, administrative roles, directorships, etc.*

Director of NISMEC - The Northern Indiana Science, Mathematics and Engineering Collaborative - in 2008 this Center expanded to

(a) include all six higher-ed institutions of South Bend

(b) became officially the north-central Indiana hub of I-STEM, the Indiana network for improving science and math education at all levels of students, but primarily K-12.

I am the editor of the annual electronic newsletter which has a mailing list (inside and outside the University) of close to 1000.

### Service to College

*Committees, projects, administrative roles, directorships, DAC, etc.*

### Service to Department

*Committees, projects, administrative positions, directorships, CAP, mentoring, etc.*

Demonstrations & Instructions Labs, Spring 2008

Outreach, Spring 2008 & Fall 2008

Space Development & Utilization, Spring 2008 & Fall 2008

Undergraduate Research, Spring 2008 & Fall 2008

### Cross College/Department Efforts/ Interdisciplinary Interactions

*Collaborative/interdisciplinary research with colleagues in other colleges, committee assignment in other colleges, interdisciplinary/cooperative teaching, etc.*

### Visibility

*Visibility in newspapers, trade magazines, interviews, visitors/guests to your laboratory/classroom, etc., not captured in the above categories:*

Fall 2008: Election Campaign for an at-large seat on the South Bend Community Schools Corporation Board - not successful - 5<sup>th</sup> out of 15 candidates.

### International Efforts

*List genuine research collaborations with international institutions/organizations; other ways in which you or your students have had an international impact or international visibility; international guests visiting your laboratory, etc.:*

### Inventions

*List your work with the Vice Presidents for Research and Technology Transfer Office involving invention disclosures, patent filings, and awarded patents:*

### Outreach (Education, Community, Industry)

*List any education, community, neighborhood outreach efforts, or outreach to industry:*

#### Other programmatic funding / Additional grants

##### (a) Proposals accepted

1. Siemens Foundation: Applied in Feb 2008, accepted April 2008, received July 2008; *Supporting inquiry-based Learning for Middle School Science Teachers*. Budget \$25,000 (received \$22,500)

2. State of Indiana Board of Education, Science Department: *Probeware for South Bend and Mishawaka Middle Schools*: applied and received October 2008 Direct costs \$16,000 spending organized by co PIs Bellina (Saint Marys) PIs Berry (ND), Funding went directly to the two school corporations.
3. 3<sup>rd</sup> year (July 05 to June 08) of 3-year Math-science Partnership: State of Indiana Board of Education: *Inquiry Learning for Students and Teachers*: applied Jan 15, 2005, 3 years June 2005-May 2008 PI: Mishawaka School City group; co PIs Berry, Morris (ND), Bellina (Saint Marys College 3-year budget \$455,000

**(b) Proposals not accepted**

1. December 2007 Math Science Partnership proposal (co-PIs: Morris, Berry at Notre Dame, Bellina at Saint Mary’s College, and South Bend School Corporation): The *Guided Learning Inquiry-Based (GLIB) Partnership* submitted December 14, 2007 to the Indiana Department of Education; budget = \$527,587; rejected April 2008.
2. 8 March 2008 Dept of Labor, pre-proposal, rejected June 2008; submitted by the Northern Indiana Workforce Board in partnership with “Michigan Works!” and the University of Notre Dame (co-PI - Gordon Berry/NISMEC) budget \$1,995,400, rejected June 2008.

**(c) proposals in process**

1. December 2008 Math-science Partnership - professional Development of K-6 teachers - Guided Inquiry in science (co-PIs: Morris, Berry at Notre Dame, Bellina at Saint Mary’s College, Michigan City and South Bend School Corporations); submitted Dec 2008

**Personal Goals for the Coming Year**

*List 2-3 personal goals for the coming year:*

1. Continue to develop NISMEC’s role in supporting the science and mathematics literacy of our community; the focus will be to develop our new positive interactions with the SBCSC administration, particularly in the Intermediate and Primary Centers; specifically, we expect to bring 21<sup>st</sup> century technology into the science and mathematics classrooms.
2. Develop a plan for project-based learning in 7<sup>th</sup> and 8<sup>th</sup> grades - to balance new State plans of “New Tech High Schools.”
3. Help orient the Indiana Board of Education to a position of recommending research based materials in all classrooms for teaching science, in contrast to the present recommendations of series of textbooks, in time for the critical science adoption year.
4. Continue to develop HOST as a downtown South Bend Science Center open to the whole community.

**Mission**

*Briefly describe or list how your work has contributed to the Notre Dame mission, the University’s goals, and/or the Catholic character of the University.*

I have developed many community/Notre Dame contacts in an effort to integrate the academic and non-academic communities in South Bend, Mishawaka and Elkhart.

**University Goals:**

1. Offer an unsurpassed undergraduate education
2. Become a pre-eminent research university
3. Ensure that the University’s Catholic character informs all its endeavors
4. Create a sustainable culture of continuous improvement and service excellence to support the University’s mission
5. Communicate strategically to internal and external constituents

