



$$E=mc^2$$

## Conference Room Dedicated to Fr. Wagener

When **Fr. Clarence M. Wagener, S.J.** died in April 2000, the Creighton University Physics Department was flooded with messages from current and previous students expressing their sorrow over the loss of a beloved mentor and friend. (See *Physics Newsletter*, Vol. VI.) As a part of our physics department for more than forty years, Fr. Wagener influenced the lives of numerous students with whom he kept in contact until the time of his death. One of his greatest joys in life was the relationships he developed and maintained with his students. He thought of them as members of his extended family.

Part of that extended family included the six physics graduates in the class of 1964. They wanted to give something back to their mentor by making improvements to a conference room to be dedicated in his name. They made the "**Fr. Clarence M. Wagener S.J. Physics Conference Room**" a reality. The dedication ceremony



Photo by Mark Romesser

*Views of the Fr. Clarence M. Wagener, S.J. Physics Conference Room. Above: A photo of Fr. Wagener in his office is shown projected on the screen. Below: A white board and presentation podium are visible in the background.*

took place on Saturday, June 11, 2005 in the Hixson-Lied Science Complex during the annual Alumni Reunion Picnic hosted by the University President.

**Fr. Wagener** had a deep love for Creighton University where he came after years of graduate stud-

ies at Saint Louis University and Stanford University. When he arrived at Creighton, the physics department was unknown and understaffed. He began the process of building the department which is now a nationally recognized program.

"He was a kindly, holy person, concerned about others, here for the students, a model of the Jesuit presence on campus," said **Dr. Tom Zepf**, a friend and colleague of Fr. Wagener who spoke at the dedication ceremony. "He was a brilliant man who enjoyed teaching astronomy in his later years, was fascinated by antique apparatus and mathematical puzzles, and especially loved the time he spent developing our physics holdings in the Creighton Library."

Fr. Wagener's devotion to these

*(Continued on Page 12)*



Photo by Mark Romesser

## Text of Remarks by Jeanne Slaninger Hutchison delivered at the Fr. Clarence M. Wagener, S.J. Physics Conference Room Dedication (June 11, 2005)

Our class was first exposed to **Fr. Clarence Wagener** in the introductory calculus-based physics sequence. We were there for a variety of reasons – some to check out a possible interest in physics, others to fulfill a requirement of another major or to fulfill a science requirement. It's advantageous for a department to have a great teacher like Father Wagener in the front line of undergraduate teaching, since majors come out of the introductory course and it is a chance for a science like physics to have its relevance, fascinations, and joys publicized to a wider than usual audience.

**Fr. Wagener** was a great teacher. He was extremely comfortable with his material. His mathematical underpinning was superb. He would energetically pace back and forth in that 4th floor classroom in the Administration Building and talk about physics like it was an old friend. He was not an entertainer, not a

*He knew the difference  
between teaching and  
student learning.*

*He was always concerned  
about the latter.*

showman. The focus was never on him, but on the subject. The introductory class we were in was fairly large, but he worked to know us and to hold our attention. By the time the first introductory course was over, I believe he already had one of us, **Joe Fennell**, in his pocket as a physics major. Quoting Joe, "His class fanned the flames of my initial interest."

I struggled initially in that first course, and wasn't really comfortable asking for help. He made it easy for me. We ran into one another in the Administration



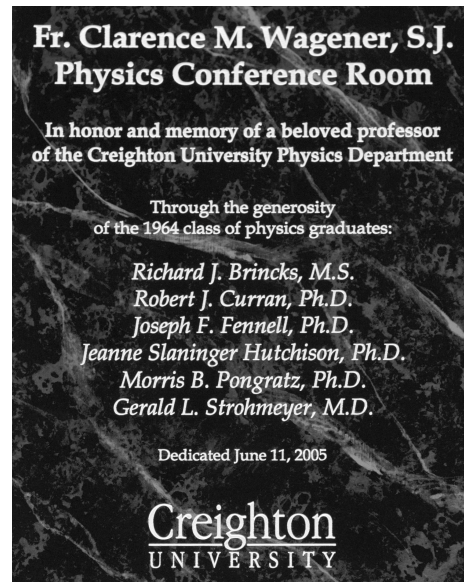
Photo by Mark Romesser

The 1964 physics graduates who were able to attend are shown standing with Dr. Zepf behind the dedication plaque and photographs donated by relatives of Fr. Wagener. From left: Joe Fennell, Dan Pongratz (representing his father, Morris), Jeanne Slaninger Hutchison, Bob Curran, and Tom Zepf.

Building sometime before the first major test, and he acted as if he knew I was on my way to see him to discuss those quizzes that I had found troublesome. When he helped you, you knew he wanted you to succeed. He could quickly bring you along. I benefited from his assistance, as did countless others through the years.

He knew the difference between teaching and student learning. He was always concerned about the latter. At the end of the first course, he planned to assess student learning by giving us a national physics test. We had a dry run a day or two before and took the exam from the previous year. I did poorly on the practice test and was upset that I had stumbled after having thought that I had regained my footing. I remained after class, and he took me over some of those questions again. I cannot tell you after 40 years exactly what those questions were. However, I have never forgotten the problem-solving keys he placed in my hands that day.

**Fr. Wagener** was known for being generally available to students, and this often occurred when he had several different physics preparations to do and some administrative responsibilities. Being a university professor is a wonderful job, but it is a difficult one. It turns out the work never ends, whether the end that



Closeup of the Dedication Plaque

we see off in the distance is a deadline or a due date. There's always something else. Going to class cannot be postponed. Class, like the light at Motel 6, is always on. It is easy to push students away sometimes, but Fr. Wagener labored to be available and helpful as well as kind.

By the time the second course in the introductory sequence was over he had **Morris Pongratz** and **Bob Curran** giving serious consideration to being physics majors, if not already committed. I know he encouraged them both. He sug-

**Fr. Wagener** maintained high expectations of his students and believed they were worthy of significant time, thought, and effort. He motivated you to do your best; you did not want to diminish the faith he had in you. As a result, he had a great positive impact on our learning. He made us feel important, and he cared that we were learning. **Fr. Wagener, Dr. Zepf,** and Creighton University assisted us through our undergraduate education to acquire an initial superiority which allowed all of us the opportunity to do fur-

ther graduate study, to come to enjoy our life's work, and find satisfaction in our personal lives.

**Fr. Wagener** did a marvelous job staying in touch with us and the other physics graduates after we left Creighton, and in keeping us abreast of what was happening in the physics department. He was like an academic parent whose support never ceased. **Bob Curran** has mentioned that when you saw him again, he acted as if no time had passed. I wrote telling him in the late 80's about a fabulous, though unpretentious, New Orleans bookstore I had stumbled across, and he fired back his wish list of out-of-print classics in mathematics and physics in case I was ever in that place again.

Last year when **Bob Curran** and I saw the physics conference room to be named for Fr. Wagener, we noticed its great potential. But it did not measure up to the man. The six physics graduates from 1964 all agreed to change that. After the funds were in-hand, I thought **Dr. Zepf** was overly optimistic when he said he thought the project could be completed by this reunion weekend, but he did not disappoint. I'm anxious to see the room as I'm sure you all are too! —*Jeanne Slaninger Hutchison*



Photo by Tom Zepf

*The dedication plaque and photos of Fr. Wagener are shown in place on the wall, along with astronomical photos and bookcases of representative physics journals.*

gested to me too, a term or two later, that I should consider being a physics major. It wasn't in my plans. Physics was just going to be a nice minor to go with my mathematics major. He knew that, but he convinced me of what a complement to mathematics a second major in physics would be. You know, that guy was a great recruiter. He recruited two excellent professors, **Dr. Zepf** and **Dr. P.K. John**, during our time here, to expand the department and to share some of the load he and **Mr. Basil Lazure** carried. At the same time he was building a critical mass of majors. He had added **Dick Brincks** and **Gerald Strohmeier** from the 1964 class. He had **Richard Ott** on track.



Photo by Mark Ronnesser

*Another view of the conference room showing a refrigerator on the left, the sink area, a microwave oven, and a display case of antique physics apparatus.*

**that was the year that was . . .**

# Physics Department Highlights of 2006

*Editor's Note: At the 2007 Evening of Reflection, the following summary of events of the past year was delivered by **Dr. David Sidebottom**, recently appointed associate chair of the physics department.*

The past year has been a somewhat hectic one. Late in the Spring of 2006, **Dr. Bob Kennedy**, then Department Chair, was tapped to replace the outgoing Dean of Arts and Sciences, Dr. Tim Austin, for one year. This last minute change led to some reshuffling of the course schedule and to the hiring of **Dr. Jack Gabel**. (See opposite page.) **Dr. Janet Seger** was asked to fill in as department chair on an interim basis, awaiting Dr. Kennedy's return. (More recently, Dr. Kennedy was asked to continue as interim Dean and Dr. Seger was appointed Chair of the Physics Department. -Ed)

An added dimension to the department is the newly activated Biological Physics Minor which has been well received and has stretched some of our classes to capacity.

This past year has been a benchmark of scholarship activity. **Dr. Mike Nichols** landed a \$739,793 NIH grant together with Dr. Bernd Fritzsich in Biomedical Sciences: "Optimizing Tracers for Multicolor Neuronal Profiling." And **Dr. Dave Sidebottom** landed two small grants of about \$35,000 each from The Petroleum Research Fund and The Research Corporation to do light scattering

on oxide glasses. These and other funding sources allowed the physics department to sponsor a record 11 graduate students to our Masters program.

Undergraduate students have showed their academic prowess as well. **Carolyn Posey** was a Ferlic Scholar in the summer of 2006 and both **Robbie Thomen** and **Jeannie Burns** have been awarded Ferlic Scholarships for this summer. Also we have three new Clare Boothe Luce Scholars, **Jennie Burns**, **Meg Marquart** and

**Carolyn Posey**, and an impressive runner-up showing by **Carolyn Posey** for the the prestigious Goldwater Scholarship. Three Physics Department scholarships were awarded: The Schrodinger Cat Scholarship to **Meg Marquart**, The Alumni Scholarship to **Brandon Rodenburg**, and The Lt. Col. Michael P. Anderson Scholarship to **Timothy Smith**.

The past year has been a year of new beginnings. We welcomed into this world **Mr. Jonas Duda** and **Ms. Leah Gabel**. (See opposite page.) We inaugurated a new introductory survey course "Exploring the Frontiers of Physics" to capture the wonder of physics in the minds of incoming freshmen interested in our degree program. Lastly, we opened a portal of interaction with our sister Jesuit physics departments in Chicago and Milwaukee. A successful joint retreat with them led to establishing a webinar project (short for **web-based seminar**, a lecture, seminar, or workshop that is transmitted over the Web -Ed).

All in all it was a fantastic year! A terrific department retreat. A fantastic Physics Field Day. A wonderful collection of people. Let's do it over again this year! □

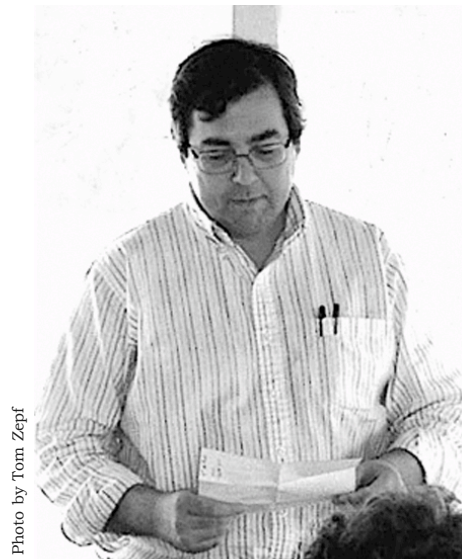


Photo by Tom Zepf

*Dr. Sidebottom is seen here delivering his "State of the Department" message.*

## For more information—visit our website

Get the latest news about Creighton University and the Physics Department by visiting the Creighton home page at: [www.creighton.edu](http://www.creighton.edu) and navigating from there. Or go directly to the physics home page at: <http://physicsweb.creighton.edu>  
Places to visit on the physics

site include: **News, Programs, Course Information, Faculty, Students, Research, Resources, and Student Financial Support.**

Here too you will find the latest results of Creighton's annual **Physics Field Day for High School Students** – a tradition started way back in May 1963!

Click on **Newsletters** in the drop down menu under **News** to get access, in pdf format, to all issues of the *Physics Newsletter* published to date.

Questions, corrections, or comments about our physics website should be directed to the webmaster, **Dr. Mike Nichols**.

# Meet the newest members of our faculty family

**D**r. **Jack R. Gabel** joined our faculty in the fall of 2006 as a visiting assistant professor of physics to fill a vacancy created when Dr. Kennedy was appointed interim Dean of the College of Arts and Sciences.

After graduating in 1994 with a bachelors degree in physics at Creighton University, Dr. Gabel went on to earn his M.S. and Ph.D. degrees in physics at the Catholic University of America in Washington, D.C.

Upon receiving his doctorate in the year 2000, Dr. Gabel took a post-doctoral research position at the NASA/Goddard Space Flight Center (Greenbelt, Maryland) and another post-doc research position at the University of Colorado Center for Astrophysics and Space Astronomy (CASA).

Dr. Gabel's speciality is observational astrophysics. At present he is investigating quasars and active galactic nuclei which he describes as

“regions in the centers of galaxies that are emitting extreme quantities of light energy, powered by mass accretion onto supermassive black holes.”

His current studies focus on energetic outflows observed to be driven from active nuclei. He points out that these have “potential implications for some fundamental questions in astrophysics,

such as how galaxies form and evolve, how nuclear blackholes grow, and how chemically processed material (*the stuff of life*) is distributed on galactic scales.”

The primary tools of research in Dr. Gabel's work are high-resolution UV, optical, and IR spectra obtained with the *Hubble Space Telescope* and other space-based observatories, and ground-based telescopes in the 8-10 meter class.

Dr. Gabel says he is thrilled to return to his alma mater and the physics department. This year he taught introductory and general physics, mathematical methods in physics, and an observational astronomy laboratory.

Dr. Gabel married his wife, **Pam Font-Gabel**, in 1998. Pam is also a Creighton alum. They have two children—**Julian** (3) and **Leah** (born February 9, 2007). In their free time they enjoy traveling and getting outdoors to hike, bike, and ski.



Dr. Gabel is seen here with his wife, Pam, and their two children, Julian (left) and Leah.

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**J**onas **Anthony Duda**, the son of **Dr. Gintaras Duda** and his wife, **Mary**, was born on July 15, 2006.

Jonas' father joined our faculty in the fall semester of 2003 as an assistant professor of physics (see *Physics Newsletter*, vol. VIII, p. 5). His mother is also employed at Creighton, holding the position of chemical coordinator for Environmental Health & Safety.

In the photo at right, **Jonas** is less than one day old and busy catching some Z's between meals.

—THZ



# Dr. Seger Pursuing Research with Students on *Ultra Peripheral Collisions*

**D**r. **Janet E. Seger**, professor of physics, longtime associate chair and recently appointed Chair of the Physics Department at Creighton University, is pursuing research supported by a three-year \$418,000 grant from the Department of Energy EPSCoR Program.

The Experimental Program to Stimulate Competitive Research (EPSCoR) is a joint program of the National Science Foundation and several U.S. states and territories. The program promotes the development of the states' science and technology resources through partnerships involving a state's universities, industry and government, and the Federal research and development enterprise.

Dr. Seger's grant funds work at the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory in New York.



Photo by Tom Zepf

*Dr. Seger is seen here conferring with one of her research students, Joey Butterworth.*

RHIC is a world-class research facility that began operation in 2000, following 10 years of development and construction.

Articles in previous issues of the Physics Newsletter (see vol. II, p. 1, vol. IV, p. 1 and vol. VI, p. 12) describe the physics department's long and on-going role in developing the control systems for the Solenoidal Tracker at RHIC, spearheaded by Creighton physics professor **Dr. Michael Cherney**. Faculty members and students, both undergraduate and graduate, have been involved in this project for many years.

Hundreds of physicists from around the world use RHIC to study what the universe may have looked like in the first few moments of creation. RHIC drives two intersecting beams of gold nuclei head on, in a subatomic collision (see photo at right). What is

learned from these collisions may help us understand why the physical world works the way it does—from the smallest particles to the largest stars.

Dr. Seger's research concentrates on interactions in which the particles miss a direct hit, called ultra peripheral collisions. Her research partner on the EPSCoR grant is **Dr. Spencer Klein** who works at the Lawrence Berkeley National Laboratory in California.

The grant funds a Creighton post-doctoral researcher, **Dr. Yury Gorbunov**, to focus on this study. It also provides funds for students, both undergraduate and graduate, to work closely with research collaborators at Lawrence Berkeley National Laboratory and to travel to the Brookhaven Laboratory to participate in the experiments. Students who have been working on this project, or soon will be, include: **Michael Swanger**, **Kimberly Kirchner** and **Joseph Butterworth** for their Masters research, and undergraduates **Ben Kopecky**, **Brian Atkinson**, **Andrew Partyka**, **Kristin Wakin**, and **Dan Blair**.

Future project plans call for doing the same type of physics at the Large Hadron Collider at CERN in Switzerland. *-THZ*



Photo provided by Brookhaven National Laboratory

*An aerial view of the Relativistic Heavy Ion Collider site in Upton, N.Y., at Brookhaven National Laboratory. Visible at the top of the photo is the 2.4-mile ring where gold nuclei are accelerated.*

## It's not *all* fun and games

# The Physics Department Retreat - 2007



Photos by Tom Zepf

Students (left) are seen performing a skit satirizing the faculty, while (right) other students and victims look on in various degrees of amusement.



On Thursday, February 1, students, faculty and staff migrated to the Creighton University Retreat Center in Griswold, Iowa, to attend the 13th annual Physics Department Retreat. The topic for this year's retreat was *Assessment of Physics Department Goals*.

Activities began with dinner on Thursday evening. Faithful to established tradition, faculty members worked as waiters, serving the students at their tables. Following dinner, the students provided entertainment, including skits satirizing faculty members—another Retreat tradition.

The activities of the evening provided students, faculty and staff an opportunity to become better acquainted. Not surprisingly, since this was a sleep-over, board games continued into the wee hours of the morning.

Friday's activities began all too soon for some. At 7:30 AM an optional Mass was provided by **Fr. Tom McShane**, with graduate student, **Fr. Andrew Ekpenyong**, co-celebrating. Breakfast prepared by the graduate students followed at 8:00 AM.

**Fr. Larry Gillick**, Director of Creighton's Deglman Center for Ignatian Spirituality, opened the morning session with reflections pertaining to our retreat topic. He then introduced **Fr. Greg Carlson**, Associate Director of the Deglman



Photo by Tom Zepf

Faculty members traditionally wait on the students at dinner during the first evening of the retreat. Dr. Cherney is seen here dishing up salads for the students in keeping with tradition.

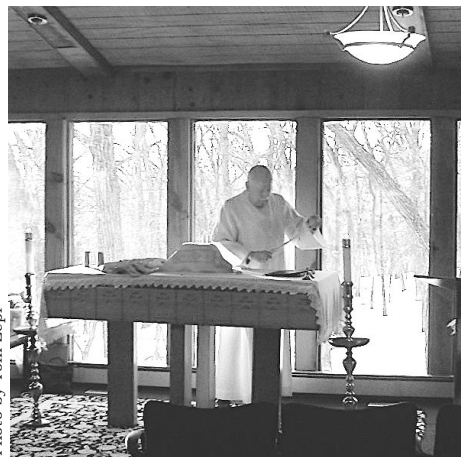


Photo by Tom Zepf

Fr. McShane is preparing to celebrate an optional morning Mass for Retreat participants in beautiful Xavier chapel, nestled in the snow-covered woods of the Creighton Retreat Center.

Center, who served as a presenter and joint discussion leader with Fr. Gillick for the morning session.

**Fr. Carlson**, a classics professor with a passion for collecting fables (and toys!), distributed a half-dozen fables for us to consider. In the group discussions that followed, we came to appreciate that each fable could have more than one moral, not always obvious, depending in part on the interpretations given to events described in the fable.

This entertaining session passed quickly and soon it was time for lunch, prepared by the undergraduate students.

As an exercise in thoughtful analysis and thinking outside the box, the morning session prepared participants for the afternoon session, led by **Dr. Janet Seger**.

Dr. Seger distributed copies of the physics department's Goals and Objectives, previously developed by the faculty and student representatives. Each discussion group was assigned one particular goal and asked to brainstorm ideas on how that goal might be assessed; i.e., how the department might determine the extent to which the objectives associated with the goal are realized.

After a lively and fruitful exchange, the retreatants headed back to the Creighton campus for an evening meal and movies featuring *The Simpsons*. —THZ

# Seventeen join our family of physics alums

Since the last issue of the *Physics Newsletter*, seventeen of our physics students have completed their bachelors or masters degrees (January 2005 through December 2006). Seven of these are continuing their studies leading to graduate degrees at various universities with support in the form of scholarships, fellowships or assistantships. Two others entered medical schools, and the rest are employed in a wide variety of occupations.

In the **Class of 2005**, five earned bachelor's degrees: **Peter Dudley** is pursuing a Ph.D. in Physics at Purdue University, **Andrew Gard** is in the University of Nebraska Medical School, **Andrew LaCroix** is pursuing a Ph.D. in Civil Engineering at North Carolina State University, **Nathan Risner** entered a Ph.D. program in Physics at the University of Nebraska, and **James Walker** is in the University of Arkansas Medical School.

Also in the **Class of 2005**, four earned master's degrees: **Laura Becker** is teaching physics, chemistry, astronomy, and forensic science at West Bend-Mallard High School in West Bend, Iowa, **Jacob Hervert** is teaching physics at Dushesne Academy in Omaha, **Joseph Huff** is working at the Stowers Institute for Medical Research in Kansas City, MO, and **Louis Licate** is pursuing a Ph.D. in Ocean Engineering at the University of Rhode Island.

## Class of 2005



Photo by Tom Zepf

**From left:**

- Jacob S. Hervert, M.S.\*
- Peter N. Dudley, B.S.Phys\*
- James C. Walker, B.S.\*
- Michael G. Swanger (2006)
- Andrew T. LaCroix, B.S.Phys\*
- Joseph M. Huff, M.S.\*
- Louis A. Licate, M.S.\*

**Not shown:**

- Laura A. Becker, M.S.\*
- Andrew P. Gard, B.S.\*
- Nathan K. Risner, B.S.\*

*Photo was taken during the Evening of Reflection at the home of Dr. Robert Kennedy on April 24, 2005.*

\*Member of Sigma Pi Sigma, the National Physics Honor Society

**From left:**

- John W. Taylor, B.S.\*
- Nicholas J. Camacho, B.S.
- Stephen C. Hansen, B.S.Phys\*
- Colleen A. Hartsig, B.S.Phys\*

**Not shown:**

- Christopher D. Anson, M.S.\*
- Brian G. Biggerstaff, B.S.
- Ann M. Kemper, B.S.Phys\*
- Michael G. Swanger, M.S.\*  
(see 2005 photo)

*Photo was taken during the Evening of Reflection at the home of Dr. Robert Kennedy on April 30, 2006.*

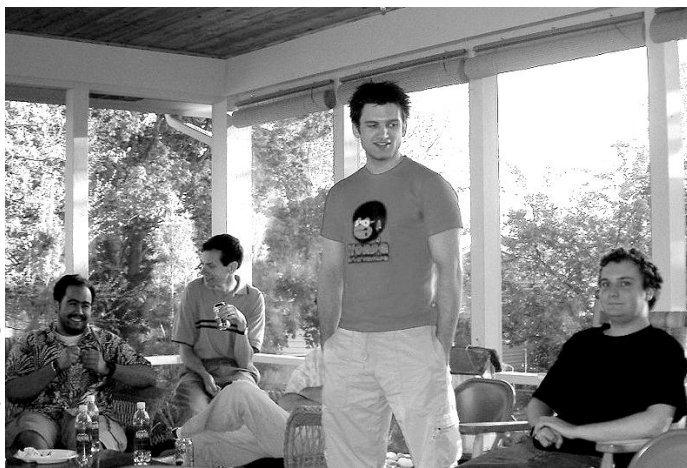
\*Member of Sigma Pi Sigma, the National Physics Honor Society

Photo by Jiro Fujita

## Class of 2006







Junior and senior physics majors caught in the act of reflection at the 2005 Evening of Reflection.

From left: Nick Camacho, Andrew LaCroix, Peter Dudley, reflecting, and John Taylor

In the **Class of 2006**, six students earned bachelor's degrees: **Brian Biggerstaff** is working in a biomedical research laboratory at the Creighton University Medical School, **Nicholas Camacho** returned home to Trinidad and Tabago in the Caribbean where he works for CIC Ltd. as a junior technician, **Stephen Hansen** will be entering the M.S. program in

## Evening of Reflection

**S**tarted about ten years ago, the Evening of Reflection has become a tradition. Held on a Sunday in late April, with final exams and graduation approaching, it's an occasion for physics students, faculty and staff to come together to reflect on the year that was. For graduating students, it's

**Colleen Hartsig** is shown here being presented with a Senior Award at the 2006 Evening of Reflection. Making the presentation is **Dr. Mike Nichols**, master of ceremonies for the awards event and moderator of the Creighton Chapter of Sigma Pi Sigma, the National Physics Honor Society. **Fr. Tom McShane** is applauding on the right.



Physics at Creighton University, **Colleen Hartsig** is pursuing a Ph.D. in Physics at the University of California, San Diego, **Ann Kemper** is grooming horses while taking time to decide on her future career path, and **John Taylor** is teaching at the Kansas State School for the Blind.

Also in the **Class of 2006**, two students earned masters degrees: **Christopher Anson** is pursuing a Ph.D. in Physics at Ohio State University and **Michael Swanger** is a medical physicist for the Jaeger Corp. in Omaha. —THZ

a time to reflect on their years at Creighton as they prepare to embark on new adventures.

Formal events include reflections from graduating students, induction of new members into Sigma Pi Sigma, announcement of newly elected Society of Physics Students officers, and the Senior Awards Ceremony—all followed by dinner and recreation.

Our thanks to **Bob and Mary Kennedy** for making their home (and pool table) available, and to **Fr. McShane** for providing an optional Mass to start us off. □

## Award Recipients in the Classes of 2005 and 2006

### College of Arts and Sciences Awards

Two of our physics graduates in this report period, both in the Class of 2006, were Clare Boothe Luce Scholars at Creighton.

**Colleen A. Hartsig**  
**Ann M. Kemper**

As such, they were recipients of *The Clare Boothe Luce Undergraduate Scholarship for Women in Science*.

### Physics Department Scholarship Awards

Criteria for the awards and a complete listing of previous recipients can be found on the Physics Department website.

#### Colleen Hartsig

was awarded *The Lt. Col. Michael P. Anderson Scholarship* in 2004-2005 and in 2005-2006, and *The Alumni Scholarship* in 2005-2006.

#### Ann Kemper

was awarded *The Schrodinger Cat Scholarship* in 2003-2004.

### Physics Department Senior Recognition Awards

Class of 2005:

*Award for Outstanding Scholarship in Physics*

**Nathan K. Risner**

*Fr. Clarence M. Wagener, S.J. Outstanding Service Award*

**Peter N. Dudley**

*Bazil N. Lazure Award for Exemplary Commitment to the Physics Department*

**Andrew T. LaCroix**

Class of 2006:

*Award for Outstanding Scholarship and Research in Physics*

**Stephen C. Hansen**  
**Colleen A. Hartsig**  
**Ann M. Kemper**

# — News from our Alums —

**John A. Rakowski**, M.S. (BS '61) died in 2004. After completing his bachelors degree at Creighton University he went on to earn a masters degree at the State University of New York (SUNY). John was an associate professor of physics and computer science at King's College in Wilkes-Barre, PA. He is credited with having built the Computer Science Program at King's College.

**Thomas M. Stephen**, Ph.D. (BSPhy '80) died from pneumonia, a complication of cancer, on February 15, 2004. He is survived by his wife, Barbara, a son and a daughter. Tom was Chair of the



Photo provided by the University of Denver

THOMAS M. STEPHEN  
17 November 1957-15 February 2004

Department of Physics and Astronomy at the University of Denver. In recognition of his dedication to students, the University of Denver established the "Thomas Stephen Memorial Scholarship Fund."

**Mark Snyder**, Ph.D. (BS '77, MS '79) completed a doctorate in physics at Texas Tech University (1990) while an officer in the U.S. Air Force. His doctoral thesis was on the physics of semiconductor device failure. In Fall, 1999, he became Chair of ROTC Air Force Aerospace Studies at the Illinois Institute of Technology in Chicago. Prior to that he was Commander of Detachment 1 of

the 31st Test and Evaluation Squadron at Kirtland AFB in Albuquerque. After retiring from the Air Force, Mark completed an M.S. degree in Civil Engineering and currently holds a position as Research Professor in the Department of Architectural Engineering at IIT. Mark says he and his wife, Jamie, live on 4 wooded acres in Chesterton, Indiana. He commutes to and from IIT by train, so he doesn't have to deal with traffic. He says he enjoys Chicago's "concrete/steel canyons" during the day "and quiet woods in the evening."

**Kevin A. Ingoldsbey** (BSPhy '80) and his wife, Val, sent a letter at Christmas loaded with news. They have two sons, Arthur and Brian, and a daughter Caitlyn. Kevin is an associate with Booz Allen Hamilton, supporting NASA in defining architecture for the Constellation Program to take us back to the Moon, Mars and beyond. He is heavily involved in a systems engineering role working with the Kennedy Space Center team. Arthur recently graduated from the University of Central Florida with a business degree in Information Systems Management, Brian is living in Palm Bay working in the Home Theaters department of Best Buy, and Caitlyn is finishing her second year at the Savannah (GA) College of Art and Design. Val is employed by Walgreens and active in the Florida Pharmacy Association.

**Yukitoshi Kondo**, M.D. (BS '85) wrote reminiscing about his five years in the physics department "learning from **Fr. Wagener**, **Fr. McShane**, **Dr. Kennedy**, **Dr. Davies**, **Dr. Zepf**, and so on. Excellent faculties!!!" He goes on to say that he is working as a medical doctor in Japan and unable to visit the U.S., but he hopes to be able to see us again sometime in the future.

**David Koh** (MS '93) wrote to tell us he had a stroke several years ago that affected his eyesight, but he says "thanks be to God He has blessed me with a miraculous healing. Now I am more conscious of my health and taking things and life at a slower pace." David lives in Singapore and continues to teach high school physics and junior college physics, math and chemistry.

**Randall Blessing** (MS '94) has been busy teaching physics, chemistry and math classes for the last seven years at St. Thomas More Academy, a private, co-educational, college-preparatory high school operated by Catholic laymen in Rayleigh, NC. Initially Randy was just one of three full-time teachers, but he says the school is growing and the environment is a good one. The school was recently selected one of the 50 Best Catholic High Schools in the U.S. Randy and his wife, Laronda, bought a home in nearby Durham, the site of Duke University where Laronda attends graduate school in public safety. To see pictures of students and faculty in action (including Randy) visit the St. Thomas More website at: [www.stmacademy.org](http://www.stmacademy.org)

**Patrick S. Moss** (MS '95, BSPhy '92) lives with his family in Los Alamos, NM—still with DOE but in a new, Nuclear Criticality Safety, position. Pat says the new position is working out well and "is potentially a good career move as currently there are only 4 qualified federal criticality safety engineers in the National Nuclear Security Administration." Pat and his wife, Angela, have 3 children, all of of whom were baptised by **Fr. McShane**: Kara (4), Rebecca (2) and Caleb (7 months).

**Erin D. Underwood**, D.O. (BS '96) and his wife Jody sent a letter last October, along with several physics-related newspaper articles

that are now posted on our “Physics in the News” bulletin board. Erin and Jody are living in Centerville, Ohio, near Dayton. Erin has been an attending anesthesiologist for over a year now, in a group called Anesthesiology Services Network. Jody, a nurse practitioner, is looking forward to joining a hospitalist group at Good Samaritan Hospital in Dayton. Last July they adopted Wrigley, a Golden Retriever puppy. They say Wrigley is “a bundle of joy and great practice for our future parenting skills.”

**Rebecca A. Burke** (BSPHy '96) wrote recently to give us her new mailing address and an update on her latest adventures. After four years teaching in the southeastern Colorado area, she now teaches mathematics at Truckee Meadows Community College in Reno, NV. Rebecca says she is “delightfully surprised with Reno.” Rather than just being a lesser Las Vegas, she says Reno has a lot to offer with Lake Tahoe about an hour away, where she goes kayaking, and plenty of hiking within a half hour. She says: “Reno is nestled in the Sierra Nevada's and, though a little brown, it is very beautiful. I think I might stick around for awhile :).” Visit Rebecca's website at Truckee Meadows College: <http://classes.tmcc.edu/rburke/bio.htm>

**Peter R. Colarco**, Ph.D. (MS '97) wrote recently saying that he and his wife, Amelia (Gates), are expecting their first child in November 2007. Pete continues to work in the Atmospheric Chemistry and Dynamics Branch of the NASA Goddard Space Flight Center in Greenbelt, Maryland. His work involves modeling the transport and evolution of clouds and aerosols in the Earth's atmosphere. This summer he will be going on a field mission to Costa Rica where NASA is flying three airplanes to sample tropical clouds. Pete also mentioned an interesting coincidence. It turns out that Amelia has an intern

working for her this summer who is a masters degree student in the Atmospheric Sciences Department at Creighton.

**Mike R. Lopez**, Ph.D. (BSPHy '98) is enjoying his work at Sandia National Laboratories in Albuquerque where he is Senior Member of the Technical Staff for Z Science Operations. While **Dr. Zepf** was in Albuquerque for an AAPT meeting in Jan. 2005 (at which Mike was presider for a Physics Education in the Southwest session) Mike gave him a grand tour and explanation of Sandia's Z-Beamlet laser and its support of the Z machine. For over a year now, Mike has been in charge of creating a production system for their consumable hardware, about a \$10 million annual budget. He says it has been an incredible experience—“a systems engineering/manager job” and he's “having a lot of fun with it.” Mike goes on to say “I had heard that a Jesuit education seeks to ... create well-rounded citizens of the world. Ever since graduating, I've become a larger and larger fan of the Jesuit education model. The core classes that I took at Creighton have been as important as the specialized physics classes.”

**Alicia (Dwyer) Cianciolo**, M.S. (BSPHy '99) and **Matthew J. Cianciolo**, D.O. (BSMP '98) are pleased to announce the arrival of the newest member of their family, Elena Terese, born on May 30,



2006. The photo above shows Elena with her proud big sister, Cameron.

**Steven K. Brady**, Ph.D. (MS '00). wrote that he successfully completed the requirements for his doctorate in physics at Washington University in Saint Louis. He and Shanon and their son, Caleb, were planning to spend a week in Florida. “Then I have a few papers to finish for publication, and mucho work to do on our condominium—stuff that's been neglected as I got close to finishing the degree.” Steve said he was applying at various places, including Boeing in St. Louis.

**Megan (Schreiner) Toney** (BS '02) gave birth to her second child, Gillian Grace Toney, on July 31, 2005. The photo below shows Gillian at her baptismal



ceremony, accompanied by proud parents, Megan and Jason, and her big sister, Cara.

**Renan Cabrera**, Ph.D. (MS '03) received his doctorate in physics recently at the University of Windsor in Ontario, Canada. **Dr. Cipolla** visited with Renan briefly last summer in Knoxville, TN, where they were both presenting posters at the annual meeting of the APS Division of Atomic, Molecular and Optical Physics. Renan's poster was titled: “A Classical Spinor Approach to the Quantum/Classical Interface: background and new results.” Presenting at the same meeting were **Christopher Verzani**, Ph.D. (MS '95, BSPHy '92) and **Jennifer Sebby**, Ph.D. (BSPHy '99). Renan

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## Conference Room Dedication

(Continued from Page 1)

pursuits is reflected in much of the furnishings of the **Fr. Clarence M. Wagener, S.J.** Physics Conference Room. Astronomical photos are mounted on the wall, bookcases are filled with a representative assortment of journals, and a display case contains antique physics and astronomy apparatus dating back to the early years of Creighton University.

We owe our special thanks to **Dr. Jeanne Slaninger Hutchison** who coordinated the fund-raising effort and spoke on behalf of the six donors during the dedication ceremony. Read her remarks beginning on page 2.

The ceremony ended with a blessing of the conference room by **Fr. Richard Ott, S.J.**, a member of the 1964 physics class who left Creighton University in his junior year to join the Jesuits. -THZ

## News from our Alums

(Continued from Page 11)

said that he has a postdoctoral offer at Windsor, but he is waiting for other opportunities as well.

**Jennifer (Reed) Bradley** (MS '04) is an MRI Research Associate in the Radiology Department at the University of Nebraska Medical Center. Currently she helps run two 7-Tesla MRI Scanners on rodents to track neurodegenerative disease progression and therapy effectiveness in animals.

Jennifer also has a hand in the data analysis, and teaches basic physics to students in the Radiation Science Technology program.

**Nicholas B. Hatcher** (BSPHy '04) wrote a long email message, in response to a request from **Dr. Nichols**, summarizing his initial experiences at Northwestern University where he is working on a doctoral program in physics. As requested, Nick made suggestions regarding the content of several of



Photo by Mark Romesser

*M.C. Tom Zepf is seen reading the dedication plaque inscription (see photo on page 2) while participants in the unveiling of the plaque and photos look on: Arts and Sciences Dean Tim Austin, Bob Curran, University President Fr. John P. Schlegel, S.J., Jeanne Slaninger Hutchison, Dan Pongratz (representing his father, Morris), and Joe Fennell.*

## Meet the Donors

### *the 1964 class of physics graduates*

**Jeanne Slaninger Hutchison, Ph.D.**, is a mathematics professor in the School of Natural Sciences and Mathematics at the University of Alabama, Birmingham. She received the Spirit of Creighton Award at the 1964 commencement ceremony.

**Robert J. Curran, Ph.D.**, living in Ellicott City, Maryland, is a Senior Research Scientist and former Director for the Goddard Earth Sciences and Technology Center at the University of Maryland, Baltimore.

**Joseph F. Fennell, Ph.D.**, of Torrance, California, holds the title of Distinguished Scientist at the Aerospace Corp. in El Segundo, CA where he uses satellites to explore the physics of the Earth's magnetosphere.

**Morris B. Pongratz, Ph.D.**, is a recently retired rocket scientist who led research in nuclear weapons phenomenology at the Los Alamos National Laboratory, NM, earning two LANL Distinguished Performance Awards.

**Richard J. Brincks, M.S.**, living in Crystal Lake, Illinois, is an expert on industrial waste-water pollution control. He sells capital-equipment filtration systems designed for that purpose.

**Gerald L. Strohmeier, M.D.** (also an M.S. in Biophysics) is retired and living in Wamego, Kansas. He did aerospace medicine for the Air Force worldwide until 1989, followed by solo and group practices in Illinois.

our advanced courses that might have better prepared him for his first term at Northwestern. Nick said he is very thankful for all the help and work our department does for its students. He noted his sadness in missing out on retreats and "all the stuff that goes along with such a great department."

**William J. Gallagher**, Ph.D. (BSPHy '74), **Jennifer (Sebby) Strabley**, Ph.D. (BSPHy '99), and **Robert J. Strabley** (MS '99) spoke

in our Fall 2005 Physics Seminar Series. Bill, a Senior Manager at the IBM Watson Research Center, spoke on "Magnetic Tunnel Junctions and their Potential for a Universal RAM Technology."

Jenni, a Postdoctoral Research Fellow at NIST, and her husband, Bob, a Physics Instructor at the United States Naval Academy, gave a joint presentation on their "Experiences and Life in the Real World after Creighton." -THZ