

# ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

**IMSA** A Pioneering Educational Community

Volume 10 No. 1 • Fall 1995

## Two American Heroes, Two History-Making Moments

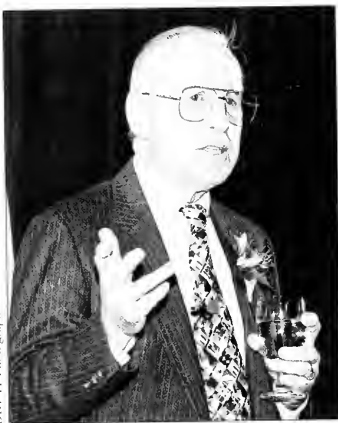
**IMSA Hosts Visits By Rosa Parks and Captain James Lovell**

**F**orty years ago, while Rosa Parks was fighting for civil rights for African Americans in Montgomery, Alabama, James Lovell was thousands of miles away preparing to serve his country as a U.S. Navy test pilot. Although their lives took very different paths, both became powerful symbols of leadership and courage to Americans and others throughout the world. Both will be remembered forever for their history-making moments.

For Rosa Parks, that moment came on December 1, 1955, when she refused to give up her seat to a white man on a Montgomery, Alabama, bus. The event led to a 381-day bus boycott by 42,000 African Americans in Montgomery. The bus boycott ended on December 21, 1956, when the U.S. Supreme Court ruled segregation on city buses unconstitutional.

Captain Jim Lovell's history-making moment came on April 13, 1970, while serving as commander of America's fifth moon launch, *Apollo 13*. Lovell and his crew averted near disaster when an explosion mid-flight drained oxygen and power.

DICK T. PHOTOGRAPHS



His story is depicted in the major motion picture, *Apollo 13*, starring Tom Hanks.

Both of these American heroes told their stories to thousands of students, teachers and other guests from throughout Illinois during back-to-back history-making events at the Illinois Mathematics and Science Academy this fall.

### Rosa Parks: Standing Up for Civil Rights

On November 15, Rosa Parks, the "mother of the modern civil rights movement," engaged in a keynote dialogue/interview with Pulitzer Prize-winning author Studs Terkel and award-winning journalist Vernon Jarrett at the Academy. The event, co-sponsored by the City of Aurora and IMSA, was attended by 2,000 guests.

In addition, the event was covered by numerous media including *People Magazine* and the *Chicago Tribune Magazine*.

Elizabeth Roberts, a student at Waubensee Valley High School in Aurora, said she was thrilled to attend such a historic event. "It is a unique and wonderful experience to see a person that you would only normally hear of in the history books in person talking about experiences and the fight for human rights," Roberts said. IMSA student Erin Slone of Park Forest agreed. "It's not every day someone gets to meet a catalyst for the civil rights movement," she said.

Following the dialogue, Parks attended a reception and met with 25 IMSA students in an interview for the *Chicago Tribune Magazine*. Students included members of various organizations including the African American Student Association, Student Council and the Peer Multicultural Educators.

(Continued on back cover)

### INSIDE

Admissions Information.....	6
Alumni Association.....	6
From the Executive Director.....	2
Parks/Lovell Photos.....	4, 5
"Real Science" CD-ROM.....	3
"SHOW BOAT".....	8
Statewide Programs.....	6
Trailblazers.....	7



Illinois Mathematics and Science Academy  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000  
708/907-5000

#### BOARD OF TRUSTEES

##### President

James D. Pearson  
*President*  
Aurora Industries

##### Vice President

Dr. Leon Lederman, Nobel Laureate  
*Director Emeritus*  
Fermi National Accelerator Laboratory  
*Pritzker Professor of Science*  
Illinois Institute of Technology

##### Trustees

G. Carl Ball  
*Chairman of the Board*  
George J. Ball, Incorporated

##### Fred Conforti

*President*  
BRK Electronics

##### Sherry R. Eagle

*Superintendent*  
Aurora West School District #129

##### Forest Ederidge

*Retired State Senator*  
*Instructor*, Aurora University

##### Dr. Geraldine A. Evans

*Executive Director*  
Illinois Community College Board

##### Sheila Griffin

*Director, Multimedia Strategy and*  
*Business Development*  
*Messaging, Information and Media Sector*  
Motorola Incorporated

##### John McEachern Jr.

*President*  
Wayne Circuits Incorporated

##### Dr. David Mintzer

*Professor of Mechanical Engineering,*  
*Physics and Astronomy*  
Northwestern University

##### Dr. Sally Pancrazio

*Dean, College of Education*  
Illinois State University

##### Jesus Manuel Sosa

*Assistant Principal*  
John F. Kennedy High School, Chicago

##### Dr. Joseph A. Spagnolo

*State Superintendent*  
State Board of Education

##### Dr. Richard Wagner

*Executive Director*  
State Board of Higher Education

##### Dr. Benjamin Williams

*Director of Academic Affairs*  
Hales Franciscan High School, Chicago

NOVA is published quarterly by the  
IMSA Institutional Advancement Office.

**Editor and Writer**  
Brenda Buschbacher

## From the Executive Director



Dear Members of the IMSA Community,

Although we are only several months into the new academic year, we already have marked our tenth year in an unprecedented way.

On October 16, IMSA opened its doors to 2,000 guests for the fifth annual James R. Thompson Leadership Lecture. Teachers and students from approximately 80 Illinois schools attended the lecture given by former NASA astronaut Captain James Lovell. All were captivated by Captain Lovell's tale recounting his voyage aboard the ill-fated Apollo 13.

Only one month later, the IMSA community welcomed Rosa Parks, the mother of the modern civil rights movement. In this historic event, award-winning author Studs Terkel and renowned journalist Vernon Jarrett moderated the dialogue with Mrs. Parks, in front of an audience of 2,000 guests. This visit by such a courageous figure in American history will be a treasured memory for all who attended.

The Academy now is accepting applications for the expanded 1996 Summer 'AD' Ventures in Mathematics, Science and Technology program for students in grades 7-10. We also are accepting applications for several professional development partnerships in problem-based learning and mathematical investigations. All of these are examples of IMSA's statewide service initiatives.

At this time, we are preparing for IMSA's first Intersession, a weeklong program which will include a variety of focused learning experiences for students which are outside the structure of the classroom. Most of the activities will occur on campus in a seminar or workshop format and include topics such as *Opera Appreciation*, *Urban Ecology*, *Chaos Theory for the Mathematics Student* and *Video Production Techniques*. We look forward to sharing more details about Intersession in the Winter NOVA.

Best wishes for the holiday season!

Sincerely,

Stephanie Pace Marshall, Ph.D.  
Executive Director

# IMSA Gets Real

By Edi Shaw, Student Writer

It was unleashed to the public on November 4, after much advertising and anticipation. For weeks, catchy slogans had appeared on colorful signs on campus, assuring us that the apocalypse of interactive software was at hand. Finally, approximately 60 members of the IMSA community gathered to witness the advent of this new age in computerized education, this awe-inspiring thing they called *Real Science*.

*Real Science*, the Academy's heavily-touted interactive CD-ROM magazine, is now officially in business. Its goal, as IMSA Executive Director Dr. Stephanie Pace Marshall proclaimed at the unveiling ceremony, is "to help third through fifth graders understand science firsthand in an active and participatory way."

The brainchild of several IMSA students, *Real Science* has been under development since September 1994, and is still being refined. "There is always something to change, something that could be better, or something that isn't quite perfect," said Arvind Sekar, a senior from Danville who has been involved from the beginning.

It all began when Sekar and senior Matt Bricton of Elgin were approached last year by then junior Mike Brody of Highland Park. Brody had formulated the idea during a Student Council discussion of how IMSA students could give back to the state of Illinois. Brody fondly recalled that his friends' initial reaction was "Sure, Mike."

## Comets, Rockets and Combustion

During the unveiling ceremony, Sekar and Bricton worked the keyboard as a miniature "electronic" version of Bricton wandered across the screen. Oriented toward students in grades 3-5, the program includes subject headings

tain an organized staff. For instance, some students write articles for the magazine while others install new graphics and technology. Others handle business matters including copyright issues.

Clearly, *Real Science* involves innumerable skills from computer science to business management; no doubt, IMSA students will learn from the program as much as the gradeschoolers it serves. As Brody, the founder and publisher, proudly declared at the November unveiling, "The foundation is put down for something wonderful."

*Edi Shaw, a senior from Dixon, is a work service student in the Office of Institutional Advancement.*



such as news, features and interactive laboratory sections. Content includes a video article with voice recordings about the 1994 comet collision on Jupiter and another about rockets. In addition, there is an interactive laboratory video of IMSA students conducting a combustion experiment, complete with a question-and-answer section and Sekar delivering helpful hints.

As the *Real Science* student staff grows in numbers and experience, they continue to add bigger and better accessories to the CD-ROM. Also, students are learning how to delegate work and still main-



DIXIE II Photographs

## IMSA FUND BOARD OF DIRECTORS

### Chairman

James R. Thompson  
Chairman  
Winston & Strawn

### Vice President

Robert Malott  
Chairman of the  
Executive Committee  
FMC Corporation

### President

Michael J. Birck  
President  
Tellabs, Inc.

### Vice President

William J. White  
Chairman and Chief  
Executive Officer  
Bell & Howell Company

### Secretary/Treasurer

Susan S. Schanlaber  
President  
The Landmark Group, Inc.

### Directors

G. Carl Ball  
Chairman of the Board  
George J. Ball, Inc.

Willard Bunn III  
Managing Director  
Chicago Corporation

Thomas Castino  
President and CEO  
Underwriters Laboratories

Dr. Floyd English  
President and Chief  
Executive Officer  
Andrew Corporation

Dr. Philip Francis  
Client Partner  
AT&T Solutions

Clifford L. Greenwalt  
President and Chief  
Executive Officer  
Central Illinois Public  
Service Company

Joanne Hansen  
President  
Furnas Foundation

Leon Jackson  
President  
Multi-Fac Corporation

John E. Jones  
Chairman of the Board,  
President and Chief  
Executive Officer  
CBI Industries

Alan Kember  
Major Accounts Vice  
President  
Northern Telecom, Inc.

Dr. Leon M. Lederman  
Nobel Laureate  
Director Emeritus  
Fermi National  
Accelerator Laboratory  
Pritzker Professor of  
Science  
Illinois Institute of  
Technology

Steven H. Lesnik  
Chief Executive Officer  
Kemper Lesnik  
Organization

Director of Institutional Advancement  
Ted Parge

Gordon R. Lohman  
President and Chief  
Executive Officer  
Amsted Industries, Inc.

Richard Lumpkin  
Chairman and CEO  
Consolidated  
Communications, Inc.

Timothy McCormick  
Vice President  
Farmer's State Bank of  
Emden

D. Chet McKee  
President and Chief  
Executive Officer  
Copley Memorial Hospital

Donald E. Nordlund  
Retired Chairman and  
Chief Executive Officer  
Staley Continental, Inc.

Paul J. O'Hollaren  
Chairman of the  
Executive Committee  
Moose International

James D. Pearson  
President  
Aurora Industries

James T. Schaefer  
Real Estate Consultant

Richard Wellek  
President and Chief  
Executive Officer  
Varlen Corporation

Douglas Whitley  
President  
Ameritech Illinois

Linda Anderson\*  
Civic Leader

Roger E. Anderson\*  
Retired Chairman and  
Chief Executive Officer  
Continental Bank of  
Chicago



Rosa Parks, the "mother of the modern civil rights movement" is surrounded by generations of admirers.



IMSA chemistry teacher Dr. Richard Dods visits with Captain Jim Lovell at a special reception following his lecture.

# Jim Lovell



\*Honorary Members



*Captain Lovell signs an autograph for an admiring fan.*



*(Left to Right) Studs Terkel, Mrs. Parks and Vernon Jarrett.*



*Rosa Parks and IMSA principal Dr. Gregg Simer.*



*(Left to Right) Jim Lovell, Nobel Laureate and IMSA Trustee Dr. Leon Lederman and Robert Malott, IMSA Fund vice president.*

# Rosa Parks

*Platform Party Members:  
(left to right) Executive  
Director Dr. Stephanie Pace  
Marshall; Sindhu Revuturi,  
IMSA Student Council  
president; Jim Lovell; and  
Robert Malott, chairman  
of the executive committee  
of EMC Corporation and  
IMSA Fund vice president.*



# IMSA Seeks Student and Teacher Applicants for Statewide Programs and Partnerships

The Illinois Mathematics and Science Academy is accepting student applications for its expanded 1996 Summer 'AD' Ventures in Mathematics, Science and Technology program and teacher applications for several professional development partnerships.

The Summer 'AD' Ventures program consists of two sessions. The first, for 160 students entering grades 7-8 in 1996, will be held at IMSA July 7-13 (80 students) and Illinois State University July 21-27 (80 students). The second, for 160 students entering grades 9-10 in 1996, will be held at Eastern Illinois University June 23-29.

Informational brochures for both sessions were mailed to all Illinois school counselors (grades 6-9). Interested students can receive an application by returning a request form contained in the brochure or by calling 1-800-500-4672 for Program I and 1-800-446-8918 for Program II. **The deadline for completed applications is January 22, 1996.**

IMSA also is seeking applications for several professional development

partnerships. IMSA's Mathematical Investigations partnership for high school mathematics teachers includes a residential summer workshop at IMSA June 24-28, 1996, and four one-day follow-up sessions throughout the 1996-97 school year. Participants also will share their work at the annual IMSA Partnership Conference. Interested teachers or teams of teachers can receive an application by calling 708-907-5069.

**The deadline for completed applications is March 31, 1996.**

In addition, this fall IMSA was awarded a contract with the Illinois State Board of Education's Center for Scientific Literacy. The contract includes the development and support of the Illinois Problem-Based Learning Network (IPBLN). Educators who have a basic understanding of problem-based learning (pbl) and would like to work with other teachers new to PBL are eligible for participation in the network. To nominate a teacher to become a charter member of the IPBLN call 708-907-5956 or e-mail [ltorp@imsa.edu](mailto:ltorp@imsa.edu).

## 1995-96 Admissions Information

To help prospective students and parents learn more about the Academy, activities are scheduled this fall and winter:

**\*Statewide Informational Meetings** (44). Sites include Belleville, Bolingbrook, Carmi, Carterville, Champaign, Chicago (7), Danville, Decatur, Dixon, East St. Louis, Effingham, Evanston, Flora, Freeport, Galesburg, Grayslake, Harvey, Hazel Crest, Jacksonville, Jerseyville, Joliet, Kankakee, Litchfield, Macomb, Mattoon, Maywood, Moline, Mt. Vernon, Normal, Northbrook, Oglesby, Peoria, Quincy, Robinson, Rockford, Sparta, Springfield and Woodstock.

**\*Visitor Information Program Days** (2). These will be held at IMSA at 1:00 p.m. on January 27 and February 18.

**\*Application Deadline.** The deadline for application to IMSA's eleventh sophomore class—the Class of 1999—is **March 1, 1996.**

For more information, call (708) 907-5027 or in Illinois 1-800-500-IMSA.

# IMSA Alumni Association Gains Momentum

By Ellen Johnson, Coordinator of Alumni and Parent Programs

Each year IMSA graduates another group of students who move forward in their lives to begin new and exciting challenges. IMSA alumni now number approximately 1,200, and their activities and accomplishments are varied and numerous. Writing web applications for the U.S. Geological Survey (Department of the Interior), studying Russian translation and interpretation, and researching optical amplifiers are just some of the activities of IMSA alumni.

In addition, IMSA alumni have organized the IMSA Alumni Association (IAA), elected a Cabinet and ratified a

Constitution. Also, the IMSA Fund for Advancement of Education now is supporting a full-time staff member to work with the growing alumni population as well as parent programs.

I am looking forward to serving in this new role and working with the Alumni Association in carrying out its mission. The IAA is dedicated to accomplishing a number of goals in the next year including an expanded alumni newsletter, a college guidebook for current IMSA students, and a stronger connection in general with the IMSA community. Additionally, we look forward to

involving many alumni in IMSA's upcoming 10th Anniversary Celebration, and in continuing programs such as Alumni Open Houses and Class Reunions.

Often one needs simply to open a newspaper to find interesting stories of IMSA graduates making a difference in Illinois and elsewhere in the world. We will continue to share examples of alumni achievements in some issues of NOVA. Alumni are encouraged to send me information about their activities, awards and contributions (708) 907-5041, or email [ellen@imsa.edu](mailto:ellen@imsa.edu).

## State, National and International Leadership

Executive Director **Dr. Stephanie Pace Marshall** presented *Embracing the Challenges, Opportunities and Spirit of Leadership for the 21st Century* at the University of Illinois at Chicago's Center for Urban Educational Development Colloquium October 17.

Mathematics teachers **Chuck Hamberg** and **Joseph Tate** presented sessions at the regional meeting of the National Council of Teachers of Mathematics October 5-6 in Grand Rapids, MI.

Mathematics teacher **George Milauskas** presented a workshop for middle school teachers on the hands-on use of an elementary level spreadsheet program at Northern Illinois University September 23 in DeKalb, IL.

**Margaret Park**, physics teacher, and **Dr. Raymond Dagenais**, curriculum and action research specialist, presented an Integrated Science session at the annual convention of the Illinois Science Teachers Association September 28-30 in Springfield, IL.

Presentations by mathematics teachers at the annual meeting in Springfield of the Illinois Council of Teachers of Mathematics October 12-14 included **Ruth Dover**, *Meet the Derivative!*; **Sue Eddins**, *Apply Yourself!*; **Yern Strong**, *Is There a Better Way to*

*Introduce Pascal?;* and **Susan Yates**, *Who Me? Change Teaching Style?*

Social science teacher **Bernie Hollister** co-presented a session on new models for world history at the annual meeting of the National Council for the Social Studies November 11 in Chicago, IL. Social science teacher **Ken Guest** co-presented a session on IMSA's *Utopia Anti-Utopia* course.

**Dr. Mark Horrell**, physics teacher, co-presented *Education in the Information Age* at a technology conference for K-12 southern Illinois superintendents at Greenville College October 13 in Edwardsville, IL.

Admission staff **Robert Hernandez** and **Therese Johnson** and students from the Peer Multicultural Educators conducted a seminar at The College of DuPage September 25 for 150 students from area high schools.

## Student and Staff Achievements

Mathematics teacher **Ronald Vavrinek** was one of three state recipients of the 1995 Illinois Presidential Awards for Excellence in Secondary Mathematics Teaching sponsored by the National Science Foundation. Science teacher **Dr. David Workman** was one of three state recipients of the 1995 Illinois Presidential Awards for Excellence in Secondary Science Teaching.

IMSA student **Anjali Adukia** of Mattoon presented *Epstein-Barr Virus: The Role of CD 45 in Lymphoma Development* at the 88th Annual Meeting of the Illinois State Academy of Science October 6-7 at Eastern Illinois University in Charleston, IL.

A total of 75 IMSA students walked in AIDSWalk 1995 in Chicago and helped raise a total of \$5792.77.

IMSA student **Krishna Yeshwant** of South Barrington presented *Use of Trypsin to Evaluate Aprotinin Formulations* at the 15th Annual Midwest Enzyme Chemistry Conference October 12-13 at the University of Illinois-Chicago.

IMSA students **Keith Amonlirdviman** of Chicago, **Andrea Croll** of Marengo, **Eric Engelhard** of Round Lake and **Krishna Yeshwant** of South Barrington presented *Creation of an Interactive Potawatomi Database and Computer Modeling of the Migration of Great Lakes Indian Tribes* at the 20th Annual Great Lakes History Conference October 6-7 in Grand Rapids, MI.

A total of 65 IMSA seniors (34.5% of the class) qualified as semifinalists in this year's National Merit Scholarship Corporation competition. Four seniors qualified as semifinalists in the National Achievement Scholarship Program for Outstanding Negro Students.



(Left to Right) IMSA students Meghan Lelonek of Rock Island, Joanna Jennie of Decatur and Trina Jenkins of Chicago portray leaders of the women's suffrage movement at a meeting sponsored by the Wheaton-Glen Ellyn chapter of the American Association of University Women held November 8 at the DuPage Historical Museum.

# Don't Miss the Boat! Tickets Still Available for April 1996 "SHOW BOAT" Performance!

Tickets are still available for the April 14 special benefit performance of "SHOW BOAT," the Jerome Kern and Oscar Hammerstein II landmark

musical saga. The ticket price of \$175 includes a pre-curtain champagne brunch in the Palmer House Hilton, the 3:00 p.m. performance at Chicago's Auditorium

Theatre with prime orchestra seating and a tax deductible contribution of \$65 to the IMSA Fund for Advancement of Education. To reserve tickets for the 1996 IMSA Fund Gala, contact Christina Morkin at (708) 907-5040.

"SHOW BOAT," which opened in New York in the fall of 1994, set a new Broadway record for the biggest advance box office gross ever earned by a re-creation/revival production.

Friends of IMSA and the IMSA Fund have enjoyed two other benefit performances: "Phantom of the Opera" in 1990 and "Miss Saigon" in 1992.

Music by Jerome KERN  
Book and Lyrics by  
Oscar HAMMERSTEIN II

# SHOW BOAT

Based on the novel  
"SHOW BOAT" by Edna FERBER  
Choreography by Susan STROMAN  
Directed by Harold PRINCE

---

## Two American Heroes (Continued from page 1)

### Apollo 13: Averting Disaster

A month earlier, on October 16, former NASA astronaut Captain Jim Lovell presented the fifth annual James R. Thompson Leadership Lecture.

*Successful Failure*, to an audience of 2,000. During the lecture, he recounted the dangerous voyage of *Apollo 13* and the numerous obstacles he and his crew overcame to survive.

Guest Travis Feuerborn, a student at Mooseheart School in Batavia, said he admired how Lovell and his crew worked together to find solutions to problems, despite the intense pressure of the situation. "It was neat how they worked together in the crisis," Feuerborn said. "I was surprised by how quickly they assembled the device so they could breathe ... pretty amazing."

Erica Enright, a student at Morgan Park Academy in Chicago, said she feels the space program is very important and hopes it will "help to unify countries through a common cause."

To order a videotape copy of the keynote dialogue with Rosa Parks or Captain Jim Lovell's lecture, contact the Office of Institutional Advancement at (708) 907-5040.



Illinois Mathematics and Science Academy  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000

Address Correction Requested

NON PROFIT ORG. BULK RATE U.S. POSTAGE PAID AURORA, IL PERMIT NO. 129
--

*Although we strive for accuracy, if you see an error in your mailing label please call the Institutional Advancement Office at (708) 907-5033.*



# ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

**IMSA** A Pioneering Educational Community

Volume 10 No. 2 • Winter 1996



## (Desert) Storms, Chaos (Theory) and the Intersession Experiment

By *Edi Shaw, Student Writer*

In the week after the winter holiday break, something different happened at IMSA—our first mid-year Intersession, yet another monumental experiment in teaching and learning in our educational laboratory.

Intersession, a series of weeklong focused learning experiences for students, offered a wide variety of topics including “Programming for Poets” and “Secrets of Forensic Fiber Microscopy.” Most of the 40-plus available sessions were taught by staff members, but a few, such as “Advanced UNIX Shell Scripting” and “Chaos Theory for the Midlevel Math Student” had student teachers.

### Desert Shield/Storm

One of the more unique offerings was the “Desert Shield/Storm” session, organized by IMSA Chief of Security James Bondi. At the time the Intersession idea was being discussed, Bondi coincidentally rented a video on Desert Storm.

“The more I thought about it, the more interested I became,” Bondi recalled. “It was really a rare opportunity,” he said.

“It let students see me in a different light, to see the military side of me ... and that I can teach.” Bondi had previously taught and is still active as a Major in the National Guard, and knew a thing or two about the military. “But I learned things I didn’t even know — the technology is changing so quickly and is more sophisticated,” Bondi said.

Throughout the week, students in Bondi’s session tasted authentic MRE meals, tried on and tested expensive night vision goggles and rode in HMMVE (High Mobility Multi-Wheeled Vehicle) military vehicles. Students also analyzed the politics and the military strategies involved, watching CNN videos and hearing such speakers as Captain Thomas Gemmell, a retired Air Force fighter pilot who also flew an F-15 Fighter in Desert Storm, and Dr. Sam Sarkesian, Loyola University professor of Political Science specializing in military affairs.

“We saw the human side of war,” Bondi said. “War is not glamorous, fun or exciting. War is carried out by the little people,” he added. “War is the final extension of politics.”

Andrew Baran, a junior from Chicago who participated in Bondi’s session, said it was a valuable supplement to classroom learning. “I thought Intersession was not only informative, but fun, and it showed connections to the real world,” Baran said. “We looked over events, history and culture, trying to find why either side was moved to war,” he said. “I think it was a very valuable experience.”

*(Continued on back cover)*

### INSIDE

AT&T Gold Star Award .....	4
From the Executive Director .....	2
Longitudinal Study .....	6
Parents’ Association .....	6
Problem-Based Learning Network .....	5
10th Anniversary Events .....	3
Trailblazers .....	7

*Sgt. Moritz of C Company 178th Infantry of the Illinois National Guard (Aurora) fits an IMSA student with night vision goggles.*

*(Photo by Brenda Buschbacher)*





Illinois Mathematics and Science Academy  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000  
708/907-5000

#### BOARD OF TRUSTEES

##### President

James D. Pearson  
*President*  
Aurora Industries

##### Vice President

Dr. Leon Lederman, Nobel Laureate  
*Director Emeritus*  
Fermi National Accelerator Laboratory  
*Pritzker Professor of Science*  
Illinois Institute of Technology

##### Trustees

G. Carl Ball  
*Chairman of the Board*  
George J. Ball, Incorporated

Fred Conforti

*President*  
BRK Electronics

Sherry R. Eagle  
*Superintendent*  
Aurora West School District #129

Forest Etheredge  
*Retired State Senator*  
*Instructor, Aurora University*

Dr. Geraldine A. Evans  
*Executive Director*  
Illinois Community College Board

Sheila Griffin  
*Director, Multimedia Strategy and*  
*Business Development*  
*Messaging, Information and Media Sector*  
Motorola Incorporated

John McEachern Jr.  
*President*  
Wayne Circuits Incorporated

Dr. David Mintzer  
*Professor of Mechanical Engineering,*  
*Physics and Astronomy*  
Northwestern University

Dr. Sally Pancrazio  
*Dean, College of Education*  
Illinois State University

Jesus Manuel Sosa  
*Assistant Principal*  
John F. Kennedy High School, Chicago

Dr. Joseph A. Spagnolo  
*State Superintendent*  
State Board of Education

Dr. Richard Wagner  
*Executive Director*  
State Board of Higher Education

Dr. Benjamin Williams  
*Director of Academic Affairs*  
Hales Franciscan High School, Chicago

NOVA is published quarterly by the  
IMSA Institutional Advancement Office.

Editor and Writer  
Brenda Buschbacher

## From the Executive Director



Dear Members of the IMSA Community,

Once again, we have begun a new year with exciting new initiatives at the Illinois Mathematics and Science Academy, and we look forward to many more exciting special events and challenges as we plan for our upcoming 10th Anniversary celebration. Let me cite a few highlights at this time.

In January, for the first time we held an Intersession, a weeklong program of focused learning experiences for students which were outside the structure of the classroom. Most of the activities occurred on campus in a seminar or workshop format and responses from students have been very positive.

Also in January, research findings of the Class of 1991 Longitudinal Study Report were released. The report indicated that IMSA's graduates continue to show a strong interest in community service and career paths in mathematics and science. In addition, other trends from IMSA's first three graduating classes (1989-1991) include a significantly higher percentage of degrees in math and science than national norms, with more than 80% intending to pursue advanced degrees.

Externally, we are pleased to announce a national collaboration with the Association for Supervision and Curriculum Development International, the largest educational member organization in the world. IMSA's Center for Problem-Based Learning is launching a nationwide network to promote additional support for problem-based learning among K-12 educators in Illinois and other states through various services including a newsletter, an Internet PBL list service, annual meetings and a national symposium. The Problem-Based Learning Network, or PBL Net, is being supported by ASCD and this spring will become one of its newest member networks.

Internally, the IMSA community is planning a variety of special events for the 1996-97 academic year to celebrate IMSA's 10th Anniversary. As we look forward to this important milestone in IMSA's history on September 7, 1996, we remain inspired by our mission and are forever grateful to those who took a vision and made it a reality.

Sincerely,

Stephanie Pace Marshall, Ph.D.  
Executive Director

# IMSA Gears Up to Celebrate and Commemorate Its 10th Anniversary

Statewide educational conferences, regional alumni activities and a public lecture series are among the special events on the agenda to celebrate and commemorate the 10th Anniversary of the Illinois Mathematics and Science Academy.

At the time IMSA opened its doors on September 7, 1986, many questioned if the Academy would remain open another year, let alone a whole decade. Ten years later, however, on September 7, 1996, IMSA will celebrate its birthday in a big way.

"The IMSA 10th Anniversary Gala is the first and most formal celebration and will honor IMSA's founding fathers Dr. Leon Lederman and former Illinois Governor James R. Thompson," said Director of Institutional Advancement Ted Parge. "In addition, internationally renowned astrophysicist Dr. Carl Sagan will be presented with the first IMSA Pioneer Award," he said. The event will be held at the premier Four Seasons Hotel in Chicago and feature CBS television anchor Bill Kurtis as the master of ceremonies.

In addition to the gala, IMSA will hold various special events in Illinois throughout the 1996-97 academic year (see graphic). IMSA Executive Director Dr. Stephanie Pace Marshall said the entire state of Illinois, not just IMSA, has reason to celebrate.

"The Illinois Mathematics and Science Academy was created to help better prepare tomorrow's workforce in the fields of mathematics and science and to find better ways to teach mathematics and science in the broader educational community," Marshall said. "Through partnerships with educators throughout the state and nation, we are well on our way ... something of which *all* Illinois can be proud of."

## Preview of 10th Anniversary Events

### September 1996

- IMSA 10th Anniversary Gala
- IMSA Day in Illinois

### October 1996

- Founders Day/Thompson Leadership Lecture
- Student Project Displays

### November 1996

- Education Partnership Conference I
- Evening Lecture Series I
- Regional Alumni Event

### January 1997

- Evening Lecture Series II

### February 1997

- Education Partnership Conference II

### March 1997

- Community Concert Celebration
- Regional Alumni Event
- IMSA Day in Springfield

### April 1997

- Aurora Arts Open House
- IMSA Day in Aurora
- Evening Lecture Series III

### May 1997

- Community Picnic
- Statewide Partnership Conference

### June 1997

- Commencement
- IMSA Alumni Open House/Reunions



## IMSA FUND BOARD OF DIRECTORS

### Chairman

James R. Thompson  
Chairman  
Winston & Strawn

### Vice President

Robert Malott  
Chairman of the  
Executive Committee  
FMC Corporation

### President

Michael J. Birck  
President  
Tellabs, Inc.

### Vice President

William J. White  
Chairman and Chief  
Executive Officer  
Bell & Howell Company

### Secretary/Treasurer

Susan S. Schanlber  
President  
The Landmark Group, Inc.

### Directors

G. Carl Ball  
Chairman of the Board  
Chicago Corporation  
George J. Ball, Inc.

Willard Bunn III  
Managing Director  
Chicago Corporation

Thomas Castino  
President and CEO  
Underwriters Laboratories

Dr. Floyd English  
President and Chief  
Executive Officer  
Andrew Corporation

Dr. Philip Francis  
Client Partner  
AT&T Solutions

Clifford L. Greenwalt  
President and Chief  
Executive Officer  
Central Illinois Public  
Service Company

Joanne Hansen  
President  
Furnas Foundation

Leon Jackson  
President  
Multi-Fac Corporation

John E. Jones  
Retired Chairman,  
President and Chief  
Executive Officer  
CBI Industries

Alan Kember  
Major Accounts Vice  
President  
Northern Telecom, Inc.

Dr. Leon M. Lederman  
Nobel Laureate  
Director Emeritus  
Fermi National  
Accelerator Laboratory  
Pritzker Professor of  
Science  
Illinois Institute of  
Technology

Steven H. Lesnik  
Chief Executive Officer  
Kemper Lesnik  
Organization

Director of Institutional Advancement  
Ted Parge

Gordon R. Lohman  
President and Chief  
Executive Officer  
Amsted Industries, Inc.

Richard Lumpkin  
Chairman and CEO  
Consolidated  
Communications, Inc.

Timothy McCormick  
Vice President  
Farmer's State Bank of  
Emden

D. Chet McKee  
President and Chief  
Executive Officer  
Copley Memorial Hospital

Donald E. Nordlund  
Retired Chairman and  
Chief Executive Officer  
Staley Continental, Inc.

Paul J. O'Hollaren  
Chairman of the  
Executive Committee  
Moose International

James D. Pearson  
President  
Aurora Industries

James T. Schaefer  
Real Estate Consultant

Richard Weltek  
President and Chief  
Executive Officer  
Varlen Corporation

Douglas Whitley  
President  
Ameritech Illinois

Linda Anderson\*  
Civic Leader

Roger E. Anderson\*  
Retired Chairman and  
Chief Executive Officer  
Continental Bank of  
Chicago

# AT&T Awards IMSA 'Gold Star' for its Math Journal for Illinois Schools

The Illinois Mathematics and Science Academy recently was awarded a \$4,750 grant from AT&T through its People First Gold Star Program. The grant will be used to support the publication costs of the *1996 IMSA Math Journal*.

Fourteen Chicago area non-profit organizations received awards (105 submitted applications). AT&T Client Partner Dr. Philip Francis, who also serves as a board member on the IMSA Fund for Advancement of Education, sponsored the Academy in the program.

"The *IMSA Math Journal* is an important project that allows the Academy to meet its mission as a catalyst for the improvement of K-12 mathematics, science and technology education throughout Illinois," said Ted Parge, director of institutional advancement.

The *1996 IMSA Math Journal* features mathematics problems for use inside and outside the classroom, teaching ideas and

lessons, insight into the role technology can play in the instruction and learning of mathematics and opportunities for teachers from throughout Illinois to provide articles and problems for future publications.

The *IMSA Math Journal* is distributed to all junior and senior high school mathematics departments throughout the state and will be accessible via the Academy's homepage on the World Wide Web.

Through the People First Gold Star Program, grants are awarded by AT&T to Chicago area non-profit organizations in three categories: traditional in-school programs, school leadership efforts and other educational programs outside the schools. A committee reviewed and selected the award recipients based on their program objectives, measurement of results, impact potential, degree of education need and AT&T employee involvement and leadership.



Ted Parge (left), IMSA director of institutional advancement, and IMSA Fund Board member Dr. Philip Francis (right) accept the AT&T People First Gold Star Award, which was presented to them by AT&T Chairman Robert Allen at an awards dinner in December.

\*Honorary Members

# IMSA and International Education Organization Partner to Promote Problem-Based Learning

IMSA's Center for Problem-Based Learning is launching a nationwide electronic and human network to connect K-12 educators who are interested in learning more about problem-based learning.

Staff members proposed creating the Problem-Based Learning Network, or PBL Net, to expand support for problem-based learning among K-12 educators in Illinois and beyond. The network is supported by the Association for Supervision and Curriculum Development (ASCD), the largest educational member organization in the world. This spring, PBL Net will become one of ASCD's newest member networks.

"PBL Net will establish, maintain, and support an interpersonal and electronic network among educators interested in problem-based learning to enable dialogue and the sharing of information, methods and materials," said Linda Torp, strategic coordinator for PBL initiatives at IMSA and PBL Net facilitator.

Membership in PBL Net includes three issues per year of *The Problem Log* newsletter (the first issue premieres in March), access to an Internet PBL list service and participation in the first PBL Net annual meeting scheduled concurrently with the ASCD National Conference in March in New Orleans.

Future plans call for the creation of a PBL World Wide Web Page and a PBL National Symposium.

*The Problem Log* newsletter will include updates on network news activities, articles written by experts and practitioners focusing on specific areas of interest in PBL, information on PBL research and various other features. The

**"PBL Net will establish, maintain, and support an interpersonal and electronic network among educators interested in problem-based learning to enable dialogue and the sharing of information, methods and materials."**

Linda Torp

Internet PBL list service is designed to facilitate real-time dialogue among those interested and working in problem-based learning. Maintained by IMSA, the list is funded by the Hitachi Foundation.

Students who use problem-based learning gather and apply knowledge from multiple disciplines in their quest for solutions to "messy" real-world problems. Guided by teachers who

facilitate learning, students develop critical thinking, problem solving, and collaborative research skills as they identify problems, formulate hypotheses, conduct data searches, perform experiments, formulate solutions and determine the best "fit" of solutions to the conditions of the problem.

PBL has been a major initiative of the Illinois Mathematics and Science Academy for several years and is used in various IMSA classes including *Science, Society and the Future*, *Biophysics, Ecology and Genetics*. Some of the problems students at IMSA have investigated included the reintroduction of the wolf into Yellowstone National Park and the social and ethical implications of genetic engineering and experimentation.

"PBL is a means to enhance student understanding through more relevant, connected learning and to tap into students' natural curiosity about the real world around them to ignite and fuel motivation for learning," Torp said.

IMSA's Center for Problem-Based Learning engages in PBL research, information exchange, teacher training and curriculum development for K-16 educational settings. For more information about PBL Net or the Center for Problem-Based Learning, call (708) 907-5956 or e-mail [ltorp@imsa.edu](mailto:ltorp@imsa.edu).



# The Problem Log

# IMSA's Class of 1991 Finds Satisfaction in 'Giving Back'; Positive Trends Apparent in First Three Classes

After graduation from IMSA, the Class of 1991 continued to show a strong interest in helping others with more than 80% engaging in volunteer community service as part of their undergraduate experience.

For example, 29% of IMSA graduates tutored either peers, underprivileged students, illiterate adults or grade school children; 12% volunteered in hospitals or in other related health care services such as emergency medical teams; 9% worked in projects to provide housing for the underprivileged and 8% volunteered in schools, libraries or literacy programs.

For the first time, respondents were asked "What do you see yourself doing in 10 years?" More than 75% of IMSA's Class of 1991 had a single career path in mind. Some of the most frequent answers included practicing medicine, teaching,

working in computer science, engaging in research, raising a family and working/living abroad.

In addition, several significant trends characterize IMSA's first three graduating classes (Classes of 1989, 1990 and 1991). Some of the trends, released in the report this fall, include:

- Compared to all students earning degrees in U.S. colleges and universities, IMSA graduates earned a significantly higher percentage of degrees in math and science. When examined by gender, both men and women earn higher percentages of degrees in math and science than the national norms.
- IMSA graduates clearly are headed towards careers in math and science, especially medicine, computer science, math and science education, and research.
- More than 80% of all IMSA graduates intend to pursue advanced degrees.
- IMSA graduates are active in community service, campus, community and even national leadership roles.
- IMSA graduates frequently receive scholarships, fellowships and research grants.
- IMSA graduates have tremendous breadth of personal, pre-professional and extracurricular experience during their college years. Each of the classes cited international travel and study as a vital experience.

For more information on the longitudinal study of IMSA graduates, contact Jay Thomas at (708) 907-5991.

---

## Parents' Association: Making a Difference

by Ellen Johnson, Coordinator of Alumni and Parent Programs

The Illinois Mathematics and Science Academy Parents' Association, formerly Parents' Council, is getting results in its efforts to increase participation. Examples include the response to this year's annual phoneathon, an additional phoneathon for parents of alumni scheduled for March 4 - 7, and an increase in attendance at monthly meetings.

Recently, the Parents' Association held its annual downstate meeting at the University of Illinois at Urbana.

Attendance was very good largely due to the generous assistance of Martha Moore, Director of Undergraduate Admissions at U of I. Parents spoke with Dr. David Barr, director of information technology service initiatives, as well as Principal Dr. Gregg Sinner. Many students also were present for the opportunity to see the campus, talk to Mrs. Moore about admissions, and visit with more than 20 of nearly 200 IMSA alumni now enrolled at U of I.

The Parents' Association continues

to explore opportunities to increase involvement with the day-to-day workings of IMSA. It hopes to ensure another record breaking turn-out for the annual Parents' Association Picnic on March 16. These and other events are crucial to continuing the active involvement of the entire IMSA community. For more information on Parents' Association activities, contact Ellen Johnson in the Office of Institutional Advancement (708) 907-5040.

## State, National and International Leadership

Executive Director **Dr. Stephanie Pace Marshall** presented *Our Gifted Children: Are They Asking Too Much?* as the keynote speaker at the Illinois State Gifted Conference December 5 in Springfield, IL.

Mathematics teacher **Titu Andreescu** was invited by the Colombian Mathematical Society to present a series of lectures to the Colombian and Peruvian International Mathematical Olympiad teams during their training January 13-16 in Bogota, Colombia.

Curriculum and Action Research Specialist **Dr. Raymond Dagenais** presented *Integrated Science—A "Mind's Eye" View of Physics in the Real World* at the American Association of Physics Teachers winter meeting January 13-18 in Reno, Nevada.

Director for Research and Design **Dr. Michael Palmisano** co-presented *Illinois Academic Standards Project: Status and Next Steps* and Strategic Coordinator for Problem-Based Learning Initiatives **Linda Torp** presented *Problem-Based Learning* at the Illinois Association for Supervision and Curriculum Development's Annual Statewide High School Conference March 1 in Oak Brook, IL.

*Congressman Harris Fawell and his wife Ruth (center) visited the Academy on January 16 to learn how students are leading the effort to integrate technology into education. Fawell serves on the U.S. House Joint Commission on Education and Science which has identified the integration of technology as a critical issue.*

(Photo by Brenda Buschbacher)

Presentations by staff at the Council for American Studies Education Annual Conference hosted by IMSA on February 16 included:

- Social Science Teacher **Bernie Hollister** - *The National Digital Library Project: A Follow-Up*
- Social Science Teacher **Dr. Claiborne Skinner** and Mentorship Coordinator **Dr. Peggy Connolly**- *Coyote Native American History Project*
- Social Science Teacher **Dr. Jim Victory**- *Rearranging the Matrix of Inquiry - Huck Finn and Planning a High Tech Lab*
- Technical Service Assistant **Jean Bigger** and Circulation Supervisor **Marlene Meegan**- *Spectrum*
- Social Science Teachers **Kenneth Guest**, **Dr. Christian Nokkented**, **Dr. Skinner** and **Jeffrey Van Davis**- *"Happy Days" in Cold War America*; and **Dr. Skinner**- *Being History*

Presentations by mathematics teachers at the 7th Annual Metropolitan Mathematics Club Conference in West Chicago, IL, February 3, included: **Sue Eddins**, *Running Around in Circles and Other Periodic Functions*; **Chuck Hamberg**, *Using "Real World Data" to Generate Classroom Problems*; **George Milauskas**, *Using Spreadsheets to Enhance the Learning of Prealgebra and Algebra and Using Spreadsheets in the Middle School Mathematics Curriculum*; and **Joseph Tate**, *De Moivre's Theorem, Complex Numbers and Matrices*.

## Student and Staff Achievements

IMSA students **Gaurav Upadhyay** of Libertyville and **Jeffrey Wang** of Naperville were named two of 300 semi-finalists in the prestigious Westinghouse Science Talent Search Competition. Upadhyay's research project was *Modification of the Aggregation Test for the Antibody Responsible for Heparin-induced Thrombocytopenia/Thrombosis* and Wang's research project was *A Study of in vivo Stress-induced Corrosion on Cast Cobalt-Chromium Alloy Hip Prothesis*.

IMSA student **Michelle Gervais** of Cary wrote *Bicycling Book Reviews: A Look at the Literature of Cycling* for the November 1995 issue of *Windy City Sports*.

IMSA student **Kevin Smith** of Crete had his letter-to-the-editor published in the December 25, 1995, edition of *Time Magazine*. His letter was part of an Integrated Science homework assignment and was a response to *Time's* December 5 cover article, *When Life Exploded*, which reported on the new discoveries related to evolution.

The 17-member IMSA Titan Dance Squad earned first place at the Palatine High School Invitational held February 3 in Palatine. The squad also placed first at the Dixon High School competition in January.



## **(Desert) Storms, Chaos (Theory)** *(Continued from page 1)*

### **Students Support Repeat**

There are definitely students who wouldn't mind repeating the experience, students such as Kathi Plinske, a junior from Crystal Lake who enrolled in the "Chaos Theory for the Midlevel Math Student" session. "I loved it!" Plinske exclaimed. "The course was extremely challenging, but I didn't have to worry about earning an A." She knew little about Chaos Theory before she took the course.

Asher Kach, a junior from Chillicothe, said his "Exploring Mathematica" session was a great learning experience and an enjoyable class. "For the first three days we learned the basic functions of the program using tutorial notebooks," Kach said. "The remaining two days we were allowed to explore the topic of our choice, mine being producing very complicated 3-D graphs and animating simpler ones."

In addition, Kach said the "Advanced UNIX Shell Scripting" session was good preparation for IMSA's Computer Seminar course. "We spent each day learning the syntax of a new UNIX programming language and then used it to best utilize the advantages offered by that specific program," said Kach.

Stephanie Manson, a sophomore from Woodstock, said the "Biostatistics"

session was challenging and interesting. "I participated in many different activities, all of which somehow took some collected data and analyzed it in many different ways," Manson said. "What really made this course work was that it focused on the broad spectrum of topics that can be covered by statistics, while at the same time, applying it specifically to biology to show us tangible results of its analyzing power."

Kirti Kamboj, a sophomore from Darien who participated in the "Programming for Poets" session, also agreed that Intersession was a good idea. Taught by Computer Science Teacher Vern Strong, the session aptly demonstrated the advantage of a focused, short-term course. "It didn't actually have anything to do with poetry," Strong said. "If students felt uneasy about computers, it gave them an idea of what programming was like," he said.

Although the session was not intended as a "draft" to bring more students into IMSA's computer programming classes, at least four of the 15 students who took the session now intend to take a programming course.



*Lt. (Lieutenant Colonel) Rick Todas of Aurora enjoys an MRE meal with IMSA staff.*

Among other available sessions were "Opera Appreciation," "Atomic Absorption Spectroscopy," "An Examination of the Depression Era by Focusing on the Evolution of Glassware," "Urban Ecology," and "Video Production Techniques."

"We hope to use Intersession as a point of departure to discover better ways of teaching and learning," said Principal Dr. Gregg Sinner. Some of IMSA's students might ultimately take their Intersession experiences as a point of departure for something else—maybe even a career.

*Edi Shaw, a senior from Dixon, is a work service student in the IMSA Office of Institutional Advancement.*



**Illinois Mathematics and Science Academy**  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000

Address Correction Requested

**Visit us on the World Wide Web!**  
<http://www.imsa.edu/>

*Although we strive for accuracy, if you see an error in your mailing label please call the Institutional Advancement Office at (708) 907-5033.*

NON PROFIT ORG.  
BULK RATE  
U.S. POSTAGE  
PAID  
AURORA, IL  
PERMIT NO. 129



# NOVA

## ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

**IMSA** A Pioneering Educational Community

Volume 10 No. 3 • Spring 1996



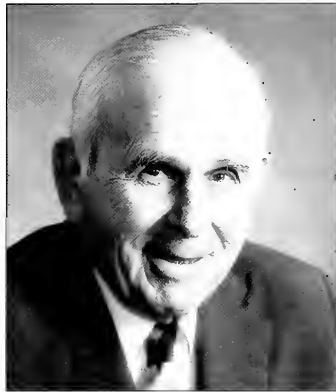
## IMSA's First Million Dollar Donor Supports Problem-Based Learning

As far as the Illinois Mathematics and Science Academy is concerned, The Harris Family Foundation is in a class by itself.

That's because a recent \$350,000 grant from the foundation makes it the first private sector million dollar donor (\$1.1 million to be exact) to the Academy.

"This latest gift will allow IMSA's Center for Problem-Based Learning to continue its work with educators throughout the state, nation and world in an effort to truly transform the way teachers teach and students learn," said Ted Parge, IMSA director of institutional advancement.

Three years ago, a \$750,000 challenge grant from Neison Harris (see photo) of The Harris Family Foundation of Northbrook, IL, enabled the Center to expand its work significantly. Since that time, the Center has worked with students and teachers in Illinois and as far away as California, Florida, Washington, New Hampshire, New York and even Singapore.



Neison Harris of The Harris Family Foundation

Staff have designed and delivered multiple professional development programs for hundreds of K-16 educators throughout Illinois and the nation. Most recently, IMSA's Center launched the Problem-Based Learning Network, or PBL Net, to expand support for problem-based learning among K-16 educators in Illinois and beyond (see Winter 1996 NOVA).

"We have come a long way with our work in the Center for Problem-Based Learning in three short years," said Linda Torp, strategic coordinator for PBL initiatives. "We continue to learn from the research we and our partners conduct and we are very grateful to The Harris Family Foundation for its outstanding support," she said.

### Examples of Center for Problem-Based Learning Activities

- **PBL Net** - A member organization created to maintain and support an interpersonal and electronic network among people who are interested in problem-based learning. The PBL Net is supported by the Association for Supervision and Curriculum Development and The Hitachi Foundation.
- **The Problem Log** - A newsletter (published three times a year) for members of PBL Net. The newsletter includes updates on network activities, articles written by experts and practitioners focusing on specific areas of interest. PBL research information and other features.
- **PBL List (IMSACPBL-L)** - An on-line Internet listserv designed to facilitate dialogue among those interested and working in problem-based learning.
- **The Neison and Bette Harris Institute for Introduction to Problem-Based Learning** - A four-day summer workshop for K-16 educators designed to provide instruction, dialogue, guided practice and mentoring in designing PBL curriculum and developing implementation strategies.
- **Conference Presentations** - CPBL staff present at numerous state and national conferences including the Illinois Principals' Association, Association for Supervision and Curriculum Development and the Illinois Association for Gifted Children.

### INSIDE

Admissions Invitations.....	3
Alumni Feature .....	8
From the Executive Director.....	2
Founder's Day, 10th Anniversary Gala ..	4
Illinois Scientific Literacy Network .....	6
Presentation Day .....	3
"SHOW BOAT" Gala .....	5
Summer Service Programs.....	6
Trailblazers.....	7

(Continued on page 4)



**Illinois Mathematics and Science Academy**  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000  
708/907-5000

**BOARD OF TRUSTEES**

**President**

James D. Pearson  
*President*  
Aurora Metals

**Vice President**

Dr. Leon Lederman, Nobel Laureate  
*Director Emeritus*  
Fermi National Accelerator Laboratory  
*Pritzker Professor of Science*  
Illinois Institute of Technology

**Trustees**

G. Carl Ball  
*Chairman of the Board*  
George J. Ball, Incorporated

Fred Conforti

*President*  
BRK Electronics

Sherry R. Eagle  
*Superintendent*  
Aurora West School District #129

Forest Etheredge  
*Retired State Senator*  
*Instructor, Aurora University*

Dr. Geraldine A. Evans  
*Executive Director*  
Illinois Community College Board

Sheila Griffin  
*Director, Multimedia Strategy and*  
*Business Development*  
*Messaging, Information and Media Sector*  
Motorola Incorporated

John McEachern Jr.  
*President*  
Wayne Circuits Incorporated

Dr. David Mintzer  
*Professor of Mechanical Engineering,*  
*Physics and Astronomy*  
Northwestern University

Dr. Sally Pancrazio  
*Dean, College of Education*  
Illinois State University

Jesus Manuel Sosa  
*Assistant Principal*  
John F. Kennedy High School, Chicago

Dr. Joseph A. Spagnolo  
*State Superintendent*  
State Board of Education

Dr. Richard Wagner  
*Executive Director*  
State Board of Higher Education

Dr. Benjamin Williams  
*Director of Academic Affairs*  
Hales Franciscan High School, Chicago

NOVA is published quarterly by the  
IMSA Institutional Advancement Office.

**Editor and Writer**  
Brenda Buschbacher

## From the Executive Director



Dear Members of the IMSA Community,

**A**s we prepare to complete the Academy's tenth academic year, let me share several spring highlights and preview exciting summer initiatives.

Professional development and other service initiatives continue to expand and remain a high priority for the Academy. This summer alone we are offering numerous programs for hundreds of teachers and students throughout Illinois. For a calendar of plans, please see the article on page 6.

As we look forward to graduation, we see that the Class of 1996 has distinguished itself in many ways. Under the leadership of IMSA's seniors, students developed *Real Science*, an interactive CD-ROM magazine for students in grades 3-5. The first issue of *Real Science* is being tested with schools throughout Illinois and the initial feedback is very favorable. In addition, the Class of 1996 is "giving back" to the Academy by establishing an endowment to help future students with difficult financial obligations.

In collaboration with the Alliance for Curriculum Reform in Washington, D.C., IMSA produced a videotape for national distribution that will feature IMSA's innovative classes and partnerships with other Illinois schools as examples of research-based practices in science teaching.

We also are pleased to announce that two of IMSA's strategic programmatic initiatives, Integrated Science and CADRE (Career Development Reinforcing Excellence) were featured this spring in *Educational Leadership*, an international publication of the Association for Supervision and Curriculum Development.

Internally, members of the IMSA Board of Trustees and IMSA Fund Board are working diligently with staff to ensure that our upcoming 10th Year Anniversary (September 7, 1996) and the following year's activities are a success. We appreciate their leadership and commitment during this milestone in IMSA's history.

Sincerely,

Stephanie Pace Marshall, Ph.D.  
Executive Director

# 1995-96 Mentorship Program's Grand Finale:

## Presentation Day Spotlights Student Research

**P**ediatric AIDS, stroke rehabilitation, computer animation, prairie restoration, Alzheimer's disease and the women's suffrage movement were among the student research topics presented during the Eighth Annual IMSA Presentation Day April 24.

More than 130 students (two-thirds females) presented their research findings in fields including gastroenterology, astrophysics, biomedical engineering, genetic pathology, international marketing, anthropology, and robotics.

Most conducted their research in IMSA's Mentorship Program, which pairs students for work on site once a week with master scholars and scientists in educational institutions, corporations and laboratories. Presentation Day, the culminating event of the Mentorship Program, models real-world scholarly conferences. Some students conducted their research through independent study or special projects with IMSA teachers.

Sessions were attended by students, staff, mentors and other guests. Erin Hawley, a senior from Staunton, co-presented "Modeling the IMSA Prairie Plot" with senior Andrea Shidle

of Palatine. "It was good to see people outside of the Academy taking an interest in our work," Hawley said.

Junior Andrew Hong from Naperville co-presented "*H-gli* Gene Expression with Transgenic Mice" along with junior Jason Roh of Freeport. "Because I had to teach others, I had to better understand the material and be confident about what I was presenting," Hong said.

Mentorship Coordinator Dr. Peggy Connolly said much of the program's success can be attributed to the dedication of the mentors. "I can not say enough about the willingness and enthusiasm of the mentors," Connolly said. "The countless hours they offer to our students truly enriches their academic experience," she said.

*Edt Shaw, a senior from Dixon and a work service student in the IMSA Office of Institutional Advancement, contributed to this article.*

## Examples of Student Presentations

- Retrospective Study of Cell-Mediated Immunity in Long Time Survivors of HIV-Infected Children
- The Movement and Transformation of Triable Centers through Two-Dimensional Space
- Dark Cells in Meningioma Brain Tumors
- The Effects of the Political Climate on the Medical Programs of the Chinese Ming and Qing Dynasties
- Primary Versus Secondary Bone Grafting in Cleft Palate Patients
- Consumer Confidence as a Leading Indicator of Consumer Spending
- Ghal Cells and Alzheimer's Disease

## IMSA Invites 11th Sophomore Class

A total of 235 students from throughout Illinois have been invited to enroll this fall as members of the Illinois Mathematics and Science Academy's (IMSA) eleventh sophomore class. Chosen from 794 applicants from 450 schools, the invited Class of 1999 represents 168 schools and 143 communities throughout the state.

Director of Enrollment Services Dr. LuAnn Smith said she continues to be overwhelmed with the response from students across Illinois. "Talented and motivated students live in every type of community in the state—rural, urban and suburban. Our efforts to recruit qualified students from all areas, with special emphasis on underrepresented areas, continue to enhance the diversity of the IMSA student body," she said.

Invited students offered admissions include 117 girls and 118 boys. The ethnic distribution of the invited class is white 53%, Asian 27%, African American 11%, Latino/Latina 6%, and non-reporting 3%.

The average SAT-I (Recentered) mathematics and verbal scores for the invited class are 640 and 595 respectively.

*IMSA junior Jennifer Tietz of Roselle works on her research project with guidance from her mentor, Dr. Gregg Mueller of the Field Museum of Natural History. Her research focused on identifying a new Costa Rican fungus. (DIG-IT Photographs)*

## IMSA FUND BOARD OF DIRECTORS

### Chairman

James R. Thompson  
*Chairman*  
Winston & Strawn

### Vice President

Robert Malott  
*Chairman of the  
Executive Committee*  
FMC Corporation

### President

Michael J. Birck  
*President*  
Tellabs, Inc.

### Vice President

William J. White  
*Chairman and Chief  
Executive Officer*  
Bell & Howell Company

### Secretary/Treasurer

Susan S. Schanlaber  
*President*  
The Landmark Group, Inc.

### Directors

Sandra Harden Austin  
*President, Physician  
Services*  
Caremark International  
Healthcare Services

G. Carl Ball  
*Chairman of the Board*  
George J. Ball, Inc.

Willard Bunn III  
*Managing Director*  
Chicago Corporation

Sterling B. Burke  
*Human Capital  
Development Manager*  
IBM - Midwestern Area

Thomas Castno  
*President and CEO*  
Underwriters Laboratories

Charles Childers  
*Regional Vice President*  
Nortel

Dr. Floyd English  
*President and Chief  
Executive Officer*  
Andrew Corporation

Peter Fox  
*Senior Managing Director*  
Bear Stearns and Company

Dr. Philip Francis  
*Client Partner*  
AT&T Solutions

Clifford L. Greenwalt  
*President and Chief  
Executive Officer*  
Central Illinois Public  
Service Company

Joanne Hansen  
*President*  
Firmas Foundation

Leon Jackson  
*President*  
Multi-Fac Corporation

John E. Jones  
*Retired Chairman,  
President and Chief  
Executive Officer*  
CBI Industries

James Lancaster  
*Executive Vice President*  
First Chicago NBD Corp.

Dr. Leon M. Lederman  
*Nobel Laureate,  
Director Emeritus*  
Fermi National Accelerator  
Laboratory  
*Pritzker Professor  
of Science*  
Illinois Institute  
of Technology

Steven H. Lesnik  
*Chief Executive Officer*  
Kemper Lesnik  
Organization

Gordon R. Lohman  
*President and Chief  
Executive Officer*  
Amsted Industries, Inc.

Richard Lumpkin  
*Chairman and CEO*  
Consolidated  
Communications, Inc.

Timothy McCormick  
*Vice President*  
Farmer's State Bank  
of Emiden

D. Chet McKeel  
*President and Chief  
Executive Officer*  
Copley Memorial Hospital

Donald E. Nordlund  
*Retired Chairman and  
Chief Executive Officer*  
Staley Continental, Inc.

Paul J. O'Hollaren  
*Chairman of the  
Executive Committee*  
Moose International

David Pasahow  
*Partner*  
Heidrick and Struggles

James D. Pearson  
*President*  
Aurora Metals

James T. Schaefer  
*Real Estate Consultant*

Richard Welck  
*President and Chief  
Executive Officer*  
Varlen Corporation

Douglas Whitley  
*President*  
Ameritech Illinois

Linda Anderson\*  
*Civic Leader*

Roger E. Anderson\*  
*Retired Chairman and  
Chief Executive Officer*  
Continental Bank of  
Chicago

### Director of Institutional Advancement

Ted Parge

\*Honorary Members

# Save the Dates for IMSA's 10th Anniversary Gala and Founder's Day Celebration

In less than four months, the Illinois Mathematics and Science Academy will celebrate its birthday with the 10th Anniversary Gala on the evening of **September 7, 1996**, at the premier Four Seasons Hotel in Chicago.

During the Gala, IMSA will honor its founding fathers, Dr. Leon Lederman and former Illinois Governor James R. Thompson. In addition, Dr. Carl Sagan, author and internationally renowned astrophysicist, will receive the first IMSA Pioneer Award and Illinois Governor Jim Edgar will receive the first IMSA Trustee Award. The event also will feature CBS television anchor Bill Kurtis as master of ceremonies.

Edgar serves as honorary chairman of the Gala and IMSA Fund Board members Robert Galvin (chairman and CEO of Motorola, Inc.) and Robert Malott (chairman of the executive committee of FMC Corporation) serve as co-chairmen.

For more information, contact Christina Morkin at (708) 907-5040.

## Thompson Leadership Lecture

Another date to mark on your calendar is **October 16, 1996**. On this date, IMSA will host a Founder's Day Celebration in conjunction with the Fifth Annual James R. Thompson Leadership Lecture to recognize the "founding leaders" of IMSA. Current and former Board members and staff, students, parents, alumni, parents of alumni, donors, Aurora community leaders, educational partners and special IMSA friends will be invited to attend.

"This event will provide a special forum to recognize many of the key IMSA founders such as charter trustees, charter staff and special friends during its founding," Parge said. The Thompson Leadership Lecture will feature keynote remarks by Lederman and Thompson.

## Problem-Based Learning (Continued from page 1)

■ **District-Based Partnerships - CPBL** staff are working with several school districts to implement a districtwide problem-based learning professional development program, a mentoring program for new teachers, and parent/community communication about problem-based learning.

■ **Research Partnerships - CPBL** staff conducted three research studies in 1995-96 with schools and school districts. The first investigated teacher change and development as these teachers came to know PBL as a curriculum development and instructional strategy; the second explored the use of PBL in IMSA's Ecology course; and the third examined the use of PBL with students at the elementary and middle school levels.

■ **Problem-Based/Service Learning -** Sponsored by the Illinois State Board of Education with Learn and Serve America funds, CPBL staff support the efforts of ISBE Regional Coordinators as they work with 15 Illinois school teams to implement a problem-based/service learning student program.

■ **Illinois Problem-Based Learning Network (IPBLN) -** Sponsored by the Illinois State Board of Education's Center for Scientific Literacy, CPBL staff are working with 16 Illinois educators to co-develop a PBL professional development experience for 36 teacher learners. Ninety middle grade students from the Aurora area will benefit from the Summer Sleuths program coordinated by these teachers.

For more information on Center for Problem-Based Learning activities, call (708) 907-5956.

IMSA's 1996 Gala

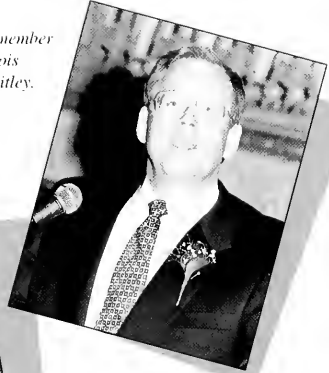
# SHOWBOAT

Hailed a Success!



IMSA parents Mrs. Revuluri and Mrs. Shidle, friend of IMISA Mr. Robert Marshall, Mr. Shulle and IMISA student Sindhu Revuluri enjoy the reception. (Photo by DIG-IT Photographs)

IMSA Fund Board member and Ameritech Illinois President Doug Whitley. (DIG-IT Photographs)



Former Illinois governor and IMISA Fund Board Chairman James Thompson told guests the importance of an education that will prepare students for the competitive global workplace. (DIG-IT Photographs)

The 1996 IMISA Fund Gala raised \$20,000. Pictured from left to right are Fund Board Chairman James Thompson, Board of Trustees President James Pearson, Fund Board Treasurer Sue Schanlaber, Fund Board President Michael Birck and IMISA Executive Director Dr. Stephanie Pace Marshall. (DIG-IT Photographs)



IMISA Gala 1996		April 14, 1996
<b>SHOWBOAT</b> Ameritech		
Pay to the Order of	IMISA Fund for Advancement of Education	\$20,000.00
Amount	Twenty Thousand and 00/100	Dollars
Memo	IMISA Showboat Benefit	IMISA Fund Board
B'D'181,296 8A2 15AD36 676 3A 2247		

## IMSA Looks Forward to Summer Service Initiatives

Summer is just around the corner and that means the Illinois Mathematics and Science Academy soon will fill its classrooms and corridors with students and teachers from throughout Illinois.

For more information on these or other statewide service initiatives, call (708) 907-5069.

### Calendar of IMSA Summer Programs

June 10-21

#### Illinois Problem-Based Learning Network Summer Institute

(see related cover story)

June 17

#### Illinois Scientific Literacy Network Conference

June 23-28

#### Mathematical Investigations Workshop

June 23-29

#### Summer 'AD' Ventures II

(professional development for teachers and program for students entering grades 9-10 in 1996)

(to be held at Eastern Illinois University)

July 7-13

#### Summer 'AD' Ventures I

(professional development for teachers and program for students entering grades 7-8 in 1996)

July 21-27

#### Summer 'AD' Ventures I

(professional development for teachers and program for students entering grades 7-8 in 1996)

(to be held at Illinois State University)

July 20-28

#### ITEAMS

(for middle school teacher teams in central Ill.)

(to be held at Illinois State University)

July 16-19

#### Neison and Bette Harris Institute for Introduction to Problem-Based Learning

(to be held in Lisle)

#### Other activities on the IMSA campus include:

June 24-29

American Association of Teachers of German Seminar (IMSA German teacher John Stark will serve as one of the teachers)

# IMSA Coordinates Illinois Scientific Literacy Network

**T**he Illinois Mathematics and Science Academy is collaborating with the Illinois State Board of Education in a statewide initiative to enhance science education.

The Illinois Scientific Literacy Network (ISLN) is an interactive professional network of Illinois educators who have received grants through the State Board's Scientific Literacy Grant Program. The ISLN is administered by IMSA with the support of the State Board.

"By giving these educators a forum to share ideas, they will in turn enhance their award-winning grant projects which will benefit students throughout Illinois," said Jack Wentland, coordinator of the ISLN.

The network of 88 grant sites includes representatives from both large and small projects, from the urban north to the rural south. Some of the projects and their goals include:

- **Fermi LInC** - to show science and math teachers in 12 districts how to implement Web site technology (Fermi National Accelerator Laboratory and Friends of Fermi, Batavia).
- **COLA-net** - to form collaborative scientific literacy assessment teams (Southern Illinois University-Carbondale).
- **Building Scientific Literacy** - to form teacher-author groups to revamp the district's K-5 science curriculum (Crystal Lake Community Consolidated School District #47).

- **Development of Integration of Math and Science Units** - to create a new integrated math/science technology curriculum (Hutsonville Community Unit #1).

The ISLN began in the 1994-95 academic year with the first cycle of grant recipients. During 1995-96, network members met at IMSA in November, January, March and May for Internet and World Wide Web training sessions.

In the next year, ISLN members will have access to an IMSA-administered electronic list which will provide another forum for on-line dialogue among members at any time. A developing resource is the ISLN home page which includes the 1994-95 grant recipients and their project abstracts, educational resource links, ISBE State Goals and links to IMSA's home page.

On June 17, 1996, 100 Illinois educators are expected to attend the first annual Illinois Scientific Literacy Network Conference at IMSA. The conference will feature 40 concurrent sessions, small group discussions, exhibits, interactive technology demonstrations and a panel on project evaluation.

To learn more about the ISLN, contact John Wentland at (708) 907-5949 or [jwentland@imsa.edu](mailto:jwentland@imsa.edu). In addition, visit the ISLN home page at <http://www.imsa.edu/project/isln/>.



Nobel Laureate and IMSA trustee Dr. Leon Lederman presented the 1996 Senior Lecture, An Evening of Conversation and Reflection on April 25, 1996. Also pictured are IMSA Executive Director Dr. Stephanie Pace Marshall and IMSA senior Anjali Adukia of Mattoon. (Photo by Brenda Buschbacher)

## State, National and International Leadership

Executive Director **Dr. Stephanie Pace Marshall** conducted a workshop on leadership, learning and the new sciences at the national conference of the American Association of School Administrators March 6-7 in San Diego, CA.

Chemistry teacher **Dr. Richard Dods** authored *A Problem-Based Learning Design for Teaching Biochemistry* in the March issue of the Journal of Chemical Education.

**Barbara Baber**, wellness teacher, presented *IMSA Wellness: An Integrative Approach to Health and Physical Education* at the national convention of the American Alliance for Health, Physical Education, Recreation and Dance April 16-20 in Atlanta, GA.

Chief of Security **Jim Bondi** wrote *Just Say Yes for the March/April 1996* edition of the Campus Law Enforcement Journal, a publication of the International Association of Campus Law Enforcement Administrators. The article focused on methods to improve communication between students and security staff.

**Bernie Hollister**, social science teacher, presented *New Models for Organizing and Teaching the World History Course, Grades 6-12* to social science teachers at a conference sponsored by Illinois State University March 18 in Bloomington-Normal, IL.

Social science teacher **Dr. Christian Nokkved** presented *Of Words and Numbers: An Attempt at Historical Analysis in a 'Postmodern' World* at the annual meeting of the Society for the Advancement of Scandinavian Study May 2-5 at the College of William and Mary in Williamsburg, VA.

The IMSA Peer Multicultural Educators group hosted the conference *Multiculturalism: It's Not Just A P.C. Thing* on April 20. Approximately



*IMSA students and staff participated in Tech 2000 at the Illinois State Capitol April 23-24. The event gave legislators the opportunity to see how schools are implementing technology today and defining its use in the future. Pictured from left to right are IMSA senior Arvind Sekar of Danville, state Sen. Chris Lauzen, IMSA senior Matt Britson of Elgin, state Rep. Suzanne Deuchler and IMSA staff members Jean Bigger and Marlene Meegan.*

(Photo courtesy of State Senator Chris Lauzen)

50 students from Crystal Lake South High School, Crystal Lake Central High School and Aurora Christian High School attended the conference.

IMSA was honored this spring as a "Best in the State" winner in *Redbook* magazine's "America's Best Schools" project. Previously IMSA was honored for "curriculum innovation" (1992) and "academic achievement" (1994).

## Student and Staff Achievements

**Eric Engelhard** of Round Lake, **Gaurav Upadhyay** of Libertyville, **Jeffrey H. Wang** of Naperville and **Rebecca Willett** of Plainfield- were among 250 students selected to present their research in Russia at Sakharov's Readings, a research and ethics conference held in honor of physicist and Nobel Peace Laureate Andrei Sakharov.

Six students- **Benjamin Chelf** of Streamwood, **Brad Friedman** of Deerfield, **Allen Lee** of Naperville, **Travis Schedler** of Carbondale, and **David Shih** and **Jakub Zielinski** of Naperville- were among the 168 nationally who qualified to take the USA Mathematical Olympiad exam.

Mentorship Coordinator **Dr. Peggy Connolly** was awarded the 14th Annual College of DuPage Adade Wheeler Award. The award has been presented since 1983 to a woman of outstanding accomplishment in the personal and or professional advancement of women.

Junior **Ryan Giordano** of Crystal Lake won first place and an all-expense paid four-week trip to Russia in the annual statewide Competition of Spoken Russian, sponsored by the American Council of Teachers of Russian. In addition, several Russian II students won medals in the 14th National Russian Essay Contest.

Senior **Vijay Karunamurthy** of Roselle won first place for his essay *Our Second Amendment Legacy* in the 1996 George S. and Stella M. Knight Essay Contest sponsored by the Illinois Society of the Sons of the American Revolution.

# IMSA Alumni: Truly "Touching the Future"



by *Ellen Johnson, Coordinator of Alumni and Parent Programs*

In reviewing reunion book questionnaire responses from IMSA alumni, I am constantly amazed at their educational and career achievements as well as their community contributions.

Our alumni are very involved in helping others less fortunate in Illinois and beyond. They tutor children and adults in many different subjects, help at animal shelters, build houses for Habitat for Humanity, participate in Amnesty International and AmeriCorps programs and lead youth groups.

Here is a small sampling of the fields IMSA alumni are entering: Carrie Mokry-Doty ('89) has started her own company: Doty Complete Computer Solutions in Round Lake Beach, IL; Meredith Gonzalez ('92)

will begin conducting breast cancer research at Northwestern Medical Center in June of this year; Michelle Garrison ('93) worked for the Texas Department of Health on a rabies vaccine project dropping coyote vaccine biscuits from the bomber bay of an airplane; Laurel Nolen ('90) works as a freelance Russian-English translator and interpreter; and Catherine Humowiecki ('92) soon will join Space Systems in Palo Alto, CA to work on satellites!

Many alumni also participate in study abroad programs and create their own international experiences. For example, Alex Heidbreder ('93) studied at the University of Argentina, Shannon Vanderspool ('92) spent a semester in Chile, Terri Willard ('89)

studied for four years at the University of Oxford, Tara Ann Vize ('91) is studying Russian Linguistics in Russia, Anastasia Linas ('93) will spend next year at the University of Nottingham, Eric Frost ('90) studied for eight months in Germany and Demmaree Lilley ('94) will spend next year in China.

On a final note, Sendhil Revuluri ('90), senior trading assistant with SBC Capital Markets Inc. in Chicago, appeared on *Jeopardy* on April 19 and 22! He did a wonderful job, missing the win by a mere \$1! Way to go Sendhil!

For more information on IMSA alumni, contact Ellen Johnson in the Office of Institutional Advancement at (708) 907-5040 or send e-mail to <ellen@imsa.edu>.



**Illinois Mathematics and Science Academy**  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000

Address Correction Requested

Visit us on the World Wide Web!  
<http://www.imsa.edu/>

*Although we strive for accuracy, if you see an error in your mailing label please call the Institutional Advancement Office at (708) 907-5033.*

NON PROFIT ORG.  
BULK RATE  
U.S. POSTAGE  
PAID  
AURORA, IL  
PERMIT NO. 129



# NOVA

## ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

**IMS**A *A Pioneering Educational Community*

Volume 10 No. 4 • Summer 1996

### Happy Birthday IMSA!

### INSIDE

Alumni Activities .....	7
Class of 1996 Commencement .....	4
From the Executive Director .....	3
Illinois Scientific Literacy Network .....	8
IMPACT II Mentor Awards .....	10
IMS Fund Highlights .....	6
Academic Program Changes .....	5
Student Research Symposium .....	8
Traillblazers .....	9

On September 7, 1996, the Illinois Mathematics and Science Academy will celebrate its 10th Anniversary. To commemorate and celebrate this important milestone in IMSA's history, various special events will be held in Illinois throughout the 1996-97 academic year. Look for more information about these events in future editions of Nova. For further information on 10th Anniversary activities, please call the Office of Institutional Advancement at (630) 907-5040.

### Touching the Future...

IMS idea inspired by Dr. Leon Lederman, Dr. Walter Massey and the Valley Industrial Association

Dr. Leon Lederman and Governor James R. Thompson lead efforts to establish IMSA

Charter students recruited and selected, Charter staff hired

Charter Class of 1989 enrolls (210 students), a *Pioneering Educational Community* is born

IMS Fund for Advancement of Education, a not-for-profit foundation, established

IMS reaches three-class capacity (sophomores, juniors and seniors, 509 students enroll)

Annual recognition program started to honor students' home school teachers

Budget authority transferred to the Illinois Board of Higher Education

1982-1985

1982

1984

1986-1996

1986

1988

1983

1985

1987

1989

Friends of Fermilab and the Corridor Partnership for Excellence in Education convene curriculum design workshop, participants propose IMSA

IMS established by Illinois General Assembly to "offer a uniquely challenging education for students talented in the areas of mathematics and science" and "serve the school system of the State as a catalyst and laboratory for the advancement of teaching"

Board of Trustees appointed

Mayor's Task Force leads efforts to locate IMSA in Aurora

Students and staff hold class in the State Capitol to underscore the promise of Illinois' investment

Supplemental appropriation by Illinois General Assembly sustains IMSA's growth

IMS launches programs for other Illinois schools, teachers and students

Furnas Foundation becomes IMSA's first private sector donor

Academic program emphasizes "apprentice investigation"

Mentorship program established

First senior class earns top ACT scores in the nation, captures many academic, extracurricular and scholarship awards; subsequent classes earn similar honors

Charter Class graduates

IMS dedicated to the People of Illinois



# Class of 1996 Celebrates Commencement

*What endures is not necessarily what is discovered, but what is communicated.*

Dr. France Anne-Dominic Cordova  
Chief Scientist, NASA

**C**ommencement speaker Dr. France Anne-Dominic Cordova issued a challenge to members of IMSA's Class of 1996: to help communicate better to the public how science and technology can benefit society.

"There are certainly some wonderful pieces on television about science and its benefits, but a lot of these are one-shot pieces relegated to certain audiences," Cordova said. She praised author and astrophysicist Dr. Carl Sagan for his "intense strive to communicate" science and space science to the general public. "But I look around and I say 'where are the others? Where are the other laureates and especially where are the young laureates of our future?'"

Cordova, chief scientist for NASA, shared her thoughts about the future on June 1 with the 186 graduates and their proud parents, relatives and friends at Aurora's Paramount Arts Centre.

Cordova stressed the importance of a well-rounded education to prepare students for the future. She said none of NASA's visions is a single disciplinary kind of vision. "They all depend on bringing together a lot of different kinds of people in collaborations — they're all really on the edges of many different

disciplines, that's what our future in space, that's what our future on the Earth is like — a very complex, multidisciplinary kind of environment," Cordova said.

---

***"We were encouraged to learn for ourselves, not for the grades. We were encouraged to take responsibility for ourselves. We were challenged, and, maybe most importantly, we learned to challenge others."***

---

***Sindhu Revuluri***  
***1996 IMSA graduate***

---

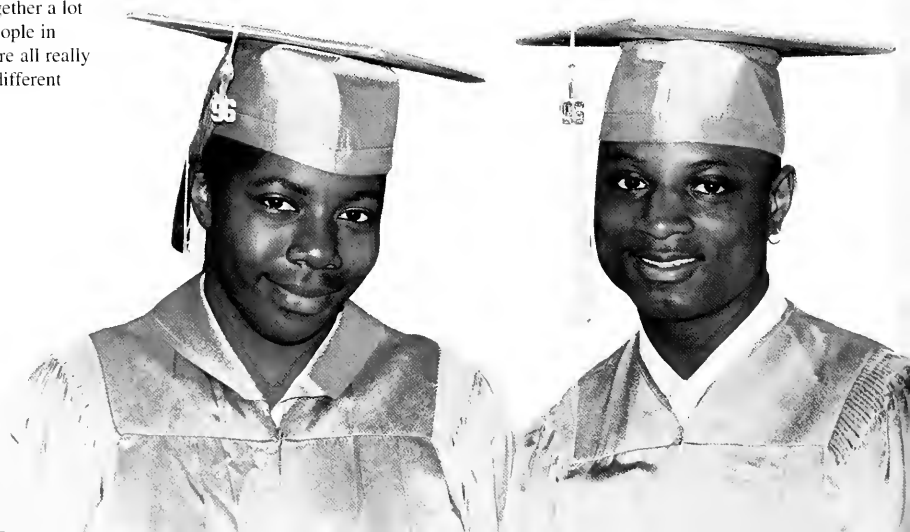
## **Seniors' Gift to IMSA**

Reflecting on the Class of 1996's three years at IMSA, Executive Director Dr. Stephanie Pace Marshall noted the seniors' "astounding" academic and cocurricular accomplishments and

commitment to give back to the Academy and future students. "This is really illustrated in their senior class gift to IMSA which is the establishment of a scholarship to help future IMSA students, who are in need, pay for their fees," she said.

Michael Brody of Highland Park and Sindhu Revuluri of Palatine were the student speakers. Revuluri said she and her fellow classmates leave IMSA changed as a result of their IMSA experience. "We were encouraged to learn for ourselves, not for the grades. We were encouraged to take responsibility for ourselves. We were challenged, and, maybe most importantly, we learned to challenge others," she said.

Following certification by IMSA Principal Dr. Gregg Sinner that members of the Class of 1996 had met graduation requirements, students received diplomas from IMSA Board of Trustees Vice President Dr. Leon Lederman and commencement medallions from Dr. Marshall.





Illinois Mathematics and Science Academy  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000  
630/907-5000

#### BOARD OF TRUSTEES

##### President

James D. Pearson  
*President*  
Aurora Metals Division L.L.C.

##### Vice President

Dr. Leon Lederman, Nobel Laureate  
*Director Emeritus*  
Fermi National Accelerator Laboratory  
*Pritzker Professor of Science*  
Illinois Institute of Technology

##### Trustees

G. Carl Ball  
*Chairman of the Board*  
George J. Ball, Incorporated

##### Fred Conforti

*President and Chief Executive Officer*  
Pitway Systems Technology Group

##### Sherry R. Eagle

*Superintendent*  
Aurora West School District #129

##### Forest Etheredge

*Retired State Senator*  
*Instructor*, Aurora University

##### Dr. Geraldine A. Evans

*Executive Director*  
Illinois Community College Board

##### Sheila MB Griffin

*Director of Applied Market Research*  
*Motorola Consumer Business Office*  
Motorola Incorporated

##### John McEachern Jr.

*President*  
Wayne Circuits Incorporated

##### Dr. David Mintzer

*Professor of Mechanical Engineering,*  
*Physics and Astronomy*  
Northwestern University

##### Dr. Sally Panerazio

*Dean, College of Education*  
Illinois State University

##### Jesus Manuel Sosa

*Assistant Principal*  
John F. Kennedy High School, Chicago

##### Dr. Joseph A. Spagnolo

*State Superintendent*  
State Board of Education

##### Dr. Richard Wagner

*Executive Director*  
State Board of Higher Education

##### Dr. Benjamin Williams

*Director of Academic Affairs*  
Hales Franciscan High School, Chicago

NOVA is published quarterly by the  
IMSA Institutional Advancement Office.

**Editor and Writer**  
Brenda Buschbacher

## From the Executive Director



Dear Members of the IMSA Community,

**T**his summer, the Illinois Mathematics and Science Academy once again opened its doors to hundreds of Illinois teachers and students for a variety of statewide service initiatives.... both old and new.

Our Summer 'AD' Ventures in Mathematics, Science and Technology program for Illinois students in grades 7-10 has become a cornerstone event. In addition, we hosted the first annual Illinois Scientific Literacy Network Conference for 100 Illinois educators and the first Illinois Problem-Based Learning Network Summer Institute for Illinois teachers and 90 middle grade students from the Aurora area.

For the second year, IMSA hosted a Mathematical Investigations Workshop for Illinois mathematics teachers and worked with middle school teacher teams from central Illinois as part of the ITEAMS professional development program partnering IMSA and ISU.

As in past years, the Center for Problem-Based Learning again held the Neison and Bette Harris Institute for Introduction to Problem-Based Learning. We look forward to expanding our work in collaboration with these and other educators in the Illinois Problem-Based Learning Network, sponsored by the State Board of Education.

It is hard to believe that we soon will celebrate IMSA's 10th Anniversary on September 7. We have come a long way, and as we continue to shape our future, the support of IMSA friends like you will be more important as we help lead the transformation of state and national policy and practice in mathematics and science education.

Sincerely,

Stephanie Pace Marshall, Ph.D.  
Executive Director



(1-to-r) Board of Trustees member John McEachern Jr., State Senator Forest Etheredge, Acting Principal Joe Meyer, Architect Bud Kleb, Board of Trustees President James Pearson and Interim Director Borden Mace review the design plans for IMSA's residence halls several months prior to the Academy's opening on September 7, 1986.



(1-to-r) Furnas Electric Company President Richard Hansen, Fermi National Accelerator Laboratory Director Dr. Leon Lederman, Illinois Governor James Thompson and IMSA Executive Director Dr. Stephanie Pace Marshall meet with Governor Thompson to discuss further plans for the Academy.

## ...the Journey Continues

First longitudinal study of IMSA graduates report reveals positive results

Board approves revolutionary strategic plan for curriculum, instruction, assessment and statewide alliances

IMSA goes online with the world, establishes a direct Internet connection

IMSA students named only pre-college presenters at the National Conference on Undergraduate Research

State and national experts conduct unique accreditation review, cite IMSA as leader and exemplar

Minority student enrollment doubles

IMSA establishes Center for Problem-based Learning

IMSA pilots school-based partnerships to transform teaching and learning in Illinois

Calculus-based Physics Study advances national understanding of gender issues in math and science

IMSA Alumni Association established

Reinvention process increases program personalization, flexibility, rigor and coherence to enhance student learning

The Harris Family Foundation becomes first million dollar+ donor

IMSA commemorates 10th Anniversary, launches second decade

1990

1992

1994

1996

1991

1993

1995

IMSA unveils Integrative Learning System for curriculum development

Academic program emphasizes "integrative ways of knowing"

Student enrollment grows to 650

Board approves innovative system of faculty development and accountability

IMSA embraces bold mission to transform mathematics and science teaching and learning through connections

IMSA identity evolves from "school" to "educational laboratory"; research and statewide service programs increase

Students launch CD-ROM interactive science magazine for elementary students

Integrated Science, Mathematical Investigations, Problem-based Learning and other initiatives serve Illinois educators and IMSA students

# Reinvention Process Charts Future Course;

## Students, Parents and Staff Play Active Role

*Reinvention is not about changing what is; it's about creating what is not.*

Stephanie Pace Marshall

**F**rom the Reinventing IMSA Steering Committee, to the Reinvention Community Workroom, to the Reinvention Community Workdays, to the Reinvention Home Page, the word *reinvention* became part of everyone's vocabulary at IMSA in 1995-96.

During the year, students, parents and staff participated in the Reinventing IMSA process in a variety of ways. They served on task forces, generated ideas for task forces, shared information about research on teaching and learning, designed new schedule frameworks and explored ways to improve the Academy's program. Why? In short, to better serve student learners. Different kinds of learners. Each individual learner.

Although IMSA's reinvention is an ongoing process, four areas were addressed first: the sophomore program, the junior/senior schedule, exploration days and student research. Staff, students and parents advanced recommendations, grounded in IMSA's mission and "informed opinion" (from general research findings and IMSA-specific data), to enhance academic program integrity (personalization, flexibility, rigor and coherence), quality of life, ethical decision-making and integrative ways of knowing.

IMSA's Faculty Forum officers—Ed Moyer, Tom Jordan, Jackie White and Socorro Cintron—provided key leadership for the process, aided by other staff, students and parents. "Being a part of the reinvention process has been one of the things I am most proud of during my time at IMSA," Moyer said. "While everyone does not agree on every detail of our reinvention, our strong common ground centers around the improvement of the teaching and learning environment for both students and staff."

Arlene Quinn of Geneva, president of the IMSA Parents' Association, said the reinvention process has been very

## Significant Decisions for 1996-97

### New schedule framework

The new modular framework, based on 20-minute mods, provides for different types of courses and learning experiences to be scheduled in different combinations of time. The designers believe this can help reduce "start and stop" fragmentation and "wasted" class time, increase opportunities for program integration and coordination, and support learning in terms of "commitment time" rather than "seat time."

### Three program pathways for sophomores

For the first time, the Academy will offer three program pathways for sophomores: Existing Core Program, Integrated Science/Integrative Learning Experience, and Perspectives. Each will have unique characteristics and support student learning in different ways. Offering three program pathways increases opportunities for IMSA, as an educational laboratory, to test different programs and methods to see how each can advance the transformation of teaching and learning in mathematics and science through an emphasis on ethical leadership and connections.

### Increased opportunities for program personalization

A project team is identifying opportunities for greater program personalization and processes by which requests from students, parents and staff will be considered. In the spirit of "one size does not fit all," the Academy's goal is to expand the number and variety of learning pathways for students. This could mean changes in course sequencing, waivers of or substitutions for certain requirements, different ways of earning credit, different assignments within classes, different uses of class time, etc.

### Use of Wednesdays for student-directed plans of inquiry

For the first time, students will develop their own plans of inquiry. These will represent areas for focused learning and investigation around meaningful questions of interest to the student. Faculty and staff will serve as mentors in this process. The student plans of inquiry are a first step toward increasing future expectations and opportunities for student research. Wednesdays will be used to support plan of inquiry work, anchored by clear and specific expectations but flexible structures.

### Navigation

A comprehensive Navigation framework to help connect various programs, activities and services in a more holistic, integrated manner, is being developed. The framework will help each student navigate his or her way through the IMSA living and learning experience for all three years. Greater emphasis will be placed on helping students understand how they can develop as powerful, integrative and ethical thinkers, learners and leaders. This will include more exploration of and dialogue about the meaning and importance of IMSA's Standards of Significant Learning.

rewarding for parents and everyone involved. "I was especially impressed with the role the students played," Quinn said. "Their opinions and ideas really mattered ... they put their heart and soul into it ... and they were committed to making a difference."

Student Kathy Plinske of Crystal Lake, who served on the Reinventing IMSA Steering Committee, said she is especially excited about the modular scheduling. "Having 100 minutes for certain science classes gives students the time to actually *discuss* the lab before it

starts, while still having time to *set* it up, *clean* it up, and discuss the results afterward," Plinske said.

During the 1996-97 year, IMSA's reinvention work will continue as the community addresses issues such as content standards, assessment of student learning and curriculum support for student research.

*Cathy Veal, director of communications, contributed to this article.*

## IMSA FUND BOARD OF DIRECTORS

### Chairman

James R. Thompson  
Chairman  
Winston & Strawn

### Vice President

Robert Malott  
Chairman of the  
Executive Committee  
FMC Corporation

### President

Michael J. Birck  
President  
Tellabs, Inc.

### Vice President

William J. White  
Chairman and Chief  
Executive Officer  
Bell & Howell Company

### Secretary/Treasurer

Susan S. Schanlaber  
President  
The Landmark Group, Inc.

### Directors

Sandra Harden Austin  
President, Physician  
Services

Caremark International  
Healthcare Services

G. Carl Ball  
Chairman of the Board  
George J. Ball, Inc.

Willard Bunn III  
Managing Director  
Chicago Corporation

Sterling M. Burke  
Human Capital  
Development Manager  
IBM - Midwestern Area

Thomas Castino  
President and CEO  
Underwriters Laboratories

Charles Childers  
President  
Nortel

Dr. Floyd English  
President and Chief  
Executive Officer  
Andrew Corporation

Peter Fox  
Senior Managing Director  
Bear Stearns and Company

Dr. Philip Francis  
Client Partner  
AT&T Solutions

Clifford L. Greenwalt  
President and Chief  
Executive Officer  
Central Illinois Public  
Service Company

Joanne Hansen  
President  
Furnas Foundation

Leon Jackson  
President  
Multi-Fac Corporation

John E. Jones  
Retired Chairman,  
President and Chief  
Executive Officer  
CBI Industries

James Lancaster  
Executive Vice President  
First Chicago NBD Corp.

Dr. Leon M. Lederman  
Nobel Laureate  
Director Emeritus  
Fermi National Accelerator  
Laboratory  
Pritzker Professor  
of Science  
Illinois Institute  
of Technology

Director of Institutional Advancement  
Ted Parge

\*Honorary Members

# IMSA Fund Gifts Exceed \$1 Million

The Illinois Mathematics and Science Academy Fund for Advancement of Education raised more than \$1.1 million dollars from the private sector in 1995-96. This included a \$350,000 grant from The Harris Family Foundation to advance the work of IMSA's Center for Problem-Based Learning.

Among other donor highlights in 1995-96, Ted Parge, director of institutional advancement, cited the following:

- A grant from the *Lloyd A. Fry Foundation* to support the SEAMS (Summer Enrichment for Academics in Math and Science) Minority Recruitment Initiative.
- A grant from the *Smithsonian Institution* to advance IMSA's Integrated Science program and partnerships.
- A grant from *Nortel* to support Real Science, an interactive CD-ROM science magazine created by IMSA students to aid the science education of students in grades 3-5.
- A grant from *The Harris Family Foundation* to create an International Partnership Fund to explore a collaboration with the Israel Arts and Science Academy to develop a curriculum focusing on ethics and values in the teaching of science and the humanities.
- An in-kind gift of science equipment from *Varien Corporation* and *Precision Scientific* for the Integrated Science and Genetics/Biology Laboratories.
- An in-kind gift of the new ProQuest direct online service from *University Microfilms International* and *Bell and Howell Company*. This system allows students immediate full image access to hundreds of magazines and journals.

## Among the special events highlights, Parge cited:

- Former NASA astronaut Captain James Lovell presented the Fifth Annual James R. Thompson Leadership Lecture to an audience of 2,000 including students and teachers from throughout Illinois. Lovell recounted his dangerous voyage while serving as commander of America's fifth moon launch, *Apollo 13*, and the numerous obstacles he and his crew overcame to survive.
- Co-sponsored by the IMSA Fund and City of Aurora, the "mother of the modern civil rights movement" Rosa Parks engaged in a keynote dialogue/interview with Pulitzer Prize-winning author Studs Terkel and award-winning journalist Vernon Jarrett before an audience of 2,000, including students and teachers from throughout Illinois.
- IMSA's 1996 Gala raised \$20,000 and the event included a pre-curtain champagne brunch at the Palmer House Hilton in Chicago, a special benefit performance of "SHOW BOAT" at Chicago's Auditorium Theatre and a tax deductible contribution to the IMSA Fund.
- The Alumni Open House was attended by alumni and guests from the IMSA Classes of 1989-1996. In the morning, the Alumni Association meeting was held to elect at-large cabinet members and identify potential projects for the coming year.

# IMSA Alumni: Staying Involved

By Ellen Johnson, Coordinator of Alumni and Parent Programs

**O**n June 15, 1996, approximately 75 alumni returned to IMSA to hold their annual Alumni Association Meeting and attend the annual Alumni Open House. It was a busy and fun day for all those who returned to see friends, faculty and staff they hadn't seen in a long time.

The IAA meeting agenda encompassed issues ranging from the election of at-large cabinet members to discussions of the IMSAAlum newsletter and other alumni initiatives. Proposed and ongoing alumni projects discussed included the following:

- **College and Career Guidebook** - This proposed book will be compiled by alumni for use by current IMSA students.
- **IMSAAlum Newsletter** - Alumni expressed an interest in seeing more issues of *IMSAAlum* each year and some changes in content to include more information about events at IMSA.
- **Regional Alumni Events** - There was discussion of organizing regional events in areas where there is a relatively high concentration of IMSA alumni.



Dale H. Photographs

Dale H. Photographs

- **10th Anniversary Events** - An alumni Homecoming event is being planned for the weekend of September 28. Jill (Howk) Gengler

(89) serves on the 10th Anniversary Planning Committee to encourage alumni participation in this and other special programs.



Dale H. Photographs

*IMSA social science teacher Dr. Christian Nokkenved and former IMSA social science teacher Hilary Rosenthal come back for a visit with alums!*

## Illinois Scientific Literacy Network Goes Online;

**Award-Winning Projects Available through IMSA's Home Page**

Access to dozens of award-winning grant projects from K-16 Illinois educators are now available at your fingertips through IMSA's home page.

The Illinois Scientific Literacy Network (ISLN), coordinated by the Illinois Mathematics and Science Academy, is an interactive professional network of Illinois educators who have received grants through the State Board of Education's Scientific Literacy Grant Program. The purpose of the ISLN is to promote scientific literacy by building a network among educators in the state.

ISLN's web site provides access to many of the resources of the network and is now accessible via IMSA's home page. The address is: <http://www.imsa.edu/project/isln/>

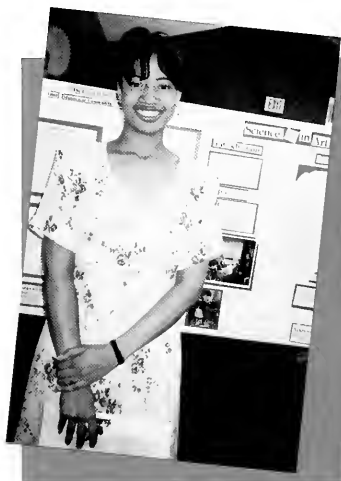
While continuing to expand, some of the current resources include: various discussion groups, educational Internet links, grant abstracts and contact names, a statewide training/event calendar, profiles of Illinois educators and World Wide Web design tips.

## IMSA Students Present Research at National Symposium

Some IMSA seniors spent the first week of their summer vacation hard at work. Six presented their research at the Third Annual Student Research Symposium of the National Consortium for Specialized Secondary Schools of Mathematics, Science and Technology.

Safia Abidi of Elmhurst, Tiffany Gholar of Chicago, Manu Goyal of Naperville, Ranjeet Rao of Matteson, Pravesh Shrestha of Quincy and JoMarie Sison of Aurora were among the 110 students from more than 40 U.S. schools selected to attend. Students gave both oral and poster presentations.

The symposium, held June 6-9 at Catholic University in Washington, D.C., also was attended by more than 100 scientists from government, industry and academia. IMSA representatives conducted their research as part of the Academy's Mentorship Program. In mentorship, students work on-site with scientists and scholars in corporations, educational institutions and laboratories in the Chicagoland area.



Senior Tiffany Gholar presents her research topic "Art History: Science in Art" in Washington, D.C.

Dr. Peggy Connolly

### The students, their research projects and mentorship sites include:

#### **Safia Abidi-**

*Astrophysics: Uncovering and Observing the Tau Neutrino*  
Fermil National Accelerator Laboratory

#### **Tiffany Gholar-**

*Art History: Science in Art*  
The Art Institute of Chicago

#### **Manu Goyal-**

*Neurology: Peptide Specificity on NMDA Receptor Sites*  
Chicago Institute for Neurosurgery and Neuroresearch

#### **Ranjeet Rao-**

*Materials Science: Oxidation Studies on Blackgas™ Silicon Oxycarbide Glass*  
University of Illinois at Chicago

#### **Pravesh Shrestha-**

*Hematology: Investigations of a Substitute Anticoagulant for Cardiac Surgery*  
Loyola University Medical Center

#### **JoMarie Sison-**

*Archaeology: Room Occupation Sequences at Pueblo Blanco*  
Northern Illinois University



### State, National and International Leadership

Executive Director **Dr. Stephanie Pace Marshall** and IMSA Principal **Dr. Gregg Sinner** attended the International Symposium of the Israel Science and Arts Academy in Tel-Aviv June 30-July 3. During their trip, supported by The Harris Family Foundation, they explored a collaboration with the Israel Arts and Science Academy and other U.S. institutions to develop curriculum focusing on ethics and values in the teaching of science and the humanities.

Chemistry teacher **Branson Lawrence** was one of seven Illinois science teachers who received the Illinois Science Teachers Association's 1996 Award of Excellence in Science Teaching.

Mathematics teacher **Chuck Hamberg** was appointed by the Board of Directors of the National Council of Teachers of Mathematics as chairperson of the *Student Math Notes* Editorial Panel and a member of the Student Committee.

### Student and Staff Achievements

Chemistry teacher **Dr. Richard Dods** authored the chapter *Diabetes mellitus* in the book *Clinical Chemistry: Theory, Analysis, Correlation*, third edition.

A team of three students won first place in the Second Annual Student Technology Leader's Competition sponsored by *MultiMedia Schools Magazine* (grades 9-12 category). **Matt Britson** of Elgin, **Michael Brody** of Highland Park and **Arvind Sekar** of Danville were honored for the creation of *Real Science*, a CD-ROM interactive science magazine for students in grades 3-5. They also were invited to present their work at the 1996 National Educational Computing Conference in Minneapolis, Minn., June 11-13.

German teacher **John Stark** received a Fulbright Teacher Exchange award to teach English in Germany during the 1996-97 academic year. Stark will teach at the Koenigin Luise Gymnasium in the city of Erfurt. His exchange partner, Heila Pfau, will teach at IMSA during the 1996-97 academic year.

Junior **David Shih** of Naperville received the inaugural Caltech Signature Award. Shih was chosen based on "innovative and creative thinking or problem solving, the motivation to go beyond what is required or expected and the curiosity and joy of discovery in mathematics, the sciences, or in related fields." (see photo)

Student **Jennifer Mack** of Chicago was awarded a full scholarship to attend the 1996 Telluride Association Summer Program at Cornell University entitled *Dissident Identities: Representations in Contemporary Anglo-American Cinema and Literature*. The junior was one of 64 students from throughout the world chosen to attend the six-week Telluride summer programs which offer college-level seminars for gifted and highly motivated high school juniors.

Junior **Lisa Byrge** of Park Ridge won sixth place in the nation for Level 4A competition on the 1996 National French Contest.

*Junior David Shih (right) is congratulated by IMSA mathematics teacher Dr. Micah Fogel (left), Dr. Stephanie Pace Marshall and a representative of Caltech for receiving the inaugural Caltech Signature Award.*



## Applications Available for IMPACT II Mentor Awards

**A**pplications are now available from the Illinois Mathematics and Science Academy for IMPACT II Mentor Awards for Illinois mathematics and science teachers.

IMPACT II, a national grant program, is designed to encourage teachers to share their professional knowledge with each other. The goal of Illinois' IMPACT II program, administered by IMSA, is to build a network of and for teachers to share innovative Learning Experiences in mathematics, science and/or technology. The Illinois IMPACT II program is sponsored by the

Toyota USA Foundation through 1996.

Eligible applicants include all K-12 public mathematics and science teachers in Illinois who have developed, implemented and measured a creative and successful Learning Experience in mathematics, science or an interdisciplinary mathematics and science field. Awards include \$400 for individual teacher Learning Experiences or \$600 for team (2-5) teacher Learning Experiences in addition to World Wide Web instruction and implementation, annual conference registration and network privileges.

**IMPACT II Mentor Award applications are available by:**

Contacting Michelle Adams -  
System for Partnership Initiatives  
(630) 907-5949 or email  
(adams@imsa.edu)

*or*

Downloading an application from  
IMSA's IMPACT II web site at  
(<http://www.imsa.edu>)



**Illinois Mathematics and Science Academy**  
1500 West Sullivan Road  
Aurora, Illinois 60506-1000

Address Correction Requested

**Visit us on the World Wide Web!**  
<http://www.imsa.edu/>

*Although we strive for accuracy, if  
you see an error in your mailing  
label please call the Institutional  
Advancement Office at (630) 907-5033.*

NON PROFIT ORG. BULK RATE U.S. POSTAGE PAID AURORA, IL PERMIT NO. 129
--