

IMSA Excellence 2000+ to Inspire Middle School Students Pilot Sites in Belleville, Chicago, Hillsboro, Oswego, Rockford and Springfield

By Catherine C. Veal

In January 2001, Illinois middle school students from seven schools will become IMSA Excellence 2000+ pioneers, embarking on an exciting journey of mathematical and scientific exploration and discovery.

IMSA Excellence 2000+ is an after-school enrichment program for Illinois middle school students who are talented, interested and motivated in mathematics and science, with special emphasis on students historically underrepresented and underserved in mathematics and science. The program also includes a professional development component for participating Illinois teachers.

IMSA is starting the program at the request of the Illinois General Assembly and with strong support from House Speaker Michael Madigan and Governor George Ryan.

Students will participate in IMSA Excellence 2000+ for up to 2-1/2 years, beginning in the 6th or 7th grade and



continuing through the 8th or 9th grade. Initially, most sessions will be held at the participating schools; later, some activities will be offered at IMSA and online.

Pilot Sites

The first-year pilot will be held at seven schools, two in Chicago, two in northern Illinois and three in central/southern Illinois. The sites are:

- Bell Elementary School, *Chicago*
- Central Junior High School, *Belleville*
- Grant Middle School, *Springfield*
- Hillsboro Junior High School, *Hillsboro*
- Michele Clark Middle School, *Chicago*
- Thompson Junior High, *Oswego*
- West Middle School, *Rockford*

Program learning experiences will focus on helping students "learn how to learn" and will emphasize logic, mathematical thinking and experimental scientific thinking. Topics will relate to the students' lives, thereby arousing their

curiosity and increasing their motivation to learn in mathematics and science. For example, in the introductory science unit the students investigate the topic of learning from several different perspectives. How do humans learn and what helps or hinders the process? Do animals learn in ways similar to humans? How do our brains get information and does the structure of the brain change when learning occurs? The introductory mathematics units focus on a variety of math topics giving students a "taste" of sequences, bases, game theory, odd and even numbers, and more. The concepts are incorporated into thought provoking games and activities.

Professional Learning

IMSA Excellence 2000+ teachers and site coordinators from the seven schools attended an initial professional development curriculum seminar at IMSA in the (continued on page 3)

INSIDE

Excellence 2000+ Program	3
From the IMSA Board Vice Chairman ..	2
Great Minds Program	5
Summer Programs	4
In Memorium	8
NBPTS Awards	6
National German Award	6
News In Brief	7



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

BOARD OF TRUSTEES

Chairman

John H. McEachern Jr.
President
Wayne Circuits Incorporated

Vice-Chairman

Sheila MB Griffin
Vice President and Director
Strategic Marketing Office
Motorola Incorporated

Trustees

Dr. Joseph Cipil
Executive Director
Illinois Community College Board

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

Dr. Forest Etheredge
Dean
School of Business and Professional Studies
Aurora University

Steve Isoye
Curriculum Leader for Science
Warren Township High School

Dr. Glenn "Max" McGee
State Superintendent
Illinois State Board of Education

Dr. Luis Nuñez
Chemist
Separation Science and Technology Section
Argonne National Laboratory

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

Dr. Marsha R. Rosner
Director
The Ben May Institute for Cancer Research
The University of Chicago

Dr. Keith Sanders
Executive Director
Illinois Board of Higher Education

Jesus Manuel Sosa
Administrator
Chicago Public Schools, Region One

Sharon Tenhouse
Teacher and Parent Educator
Community Unit School District #2 (Liberty, IL)

Dr. Alfonso Thurman
Dean, College of Education
Northern Illinois University

Dr. Michael S. Turner
Department Chairman
Department of Astronomy & Astrophysics
The University of Chicago

President

Dr. Stephanie Pace Marshall

NOIA is published three times a year by the
IMSA Office of Institutional Advancement
and Public Policy.

Send comments or questions to:
Editor and Writer
Brenda Buschbacher
brenda@imsa.edu

From the IMSA Board Vice Chairman



Dear IMSA Shareholders,

In the spring, after almost 16 years of service and with mixed emotions, I will submit my resignation as a member of the IMSA Board of Trustees. As a founding Board member, I am very proud of what IMSA has accomplished and what IMSA is today.

After our appointment in 1985, the first Board had a whirlwind year of activity. We convened in makeshift offices in downtown Aurora. We bought a building, wrote policy, hired faculty and staff, and admitted students. I personally directed efforts to create the logo and Academy colors and fought for windows and light in the residence halls and bathrooms.

I have been passionate about, committed to and active in IMSA because I always wanted to make sure that students with potential, who might otherwise "fall through the cracks," had a place to be. When we opened our doors in 1986 and held our first reception for the IMSA Community, a new IMSA student approached me and said, "Thank you. I finally feel like I belong somewhere." That still inspires me!

As I move on to other challenges, I want to recognize several individuals for their significant personal contributions to my IMSA journey. Special thanks to: Governors *Jim Thompson, Jim Edgar and George Ryan* for appointing me to the IMSA Board; *Jack McEachern, Jim Pearson and Manny Sosa*, fellow founding Board members who continue to serve; former Board member *Dr. Leon Lederman*, one of IMSA "founding fathers;" Congressman and Speaker of the House *Denny Hastert* and Retired State Senator *Forest Etheredge*, key legislative champions in the Illinois General Assembly in IMSA's early years; and *Dr. Stephanie Pace Marshall*, IMSA's president, for her bold leadership and uncompromising integrity.

I would also like to thank Motorola, specifically Bob and Chris Galvin, for their support and for encouraging all Motorola leaders and employees to give back to their communities through volunteerism.

IMSA has been a terrific investment. As a business executive, I appreciate ROI – the people of Illinois will reap a return on their investment for many years. Dr. Carl Sagan once called IMSA "a gift from the People of Illinois to the human future." IMSA also has been a gift to me, one I will always treasure and for which I will always be grateful.

Warmest wishes,

Sheila MB Griffin
Vice Chairman, IMSA Board of Trustees

IMSA Excellence 2000+ (continued from cover)

fall. Mary Lou Lipscomb, professional development and curriculum specialist, said the group was enthusiastic and great advocates for middle school students. "After two days packed with activities, the educators had developed a plan for the implementation of the program in their individual school sites and forged new links with colleagues from around the state."

Anthony Zackery, a science teacher from West Middle School in Rockford, said he is proud to be actively involved in such a worthwhile endeavor.

"I truly believe that we are at the beginning of a scientific mission that will have a significant and positive impact on participating students and teachers."

Dennis Skaggs, a teacher from Grant Middle School in Springfield, agreed saying "E2K+ is an excellent opportunity to get students excited about learning!"

Program Benefits

IMSA President Dr. Stephanie Pace Marshall saluted Illinois lawmakers for their attention to the needs of talented middle school students. "At this age, students are making decisions about who they are and are not going to become, and somewhere around middle school, far too many lose interest in science and mathematics," she said. "IMSA Excellence 2000+ is a wonderful way for the State of Illinois to confront and help reverse that troubling pattern."

Project Director Ann Wohlberg said IMSA Excellence 2000+ will benefit participating schools, students and teachers, as well as their communities, the corporate sector and the Illinois educational system. "The schools will receive support for their efforts to serve the needs of talented, interested and motivated learners. Students will strengthen their foundation for the future study of science and mathematics, and teachers will have access to exemplary professional development programs and materials," she said.



Photo by: Brian Quimby

Rockford science teacher Anthony Zackery entices prospective E2K+ students to learn the bone structure of his friend's hand.

"I truly believe that we are at the beginning of a scientific mission that will have a significant and positive impact on participating students and teachers."

*Anthony Zackery
Science Teacher
West Middle School
Rockford, IL*

Among the benefits to Illinois communities and the State as a whole will be greater access to IMSA through programs and services delivered at the local level and students who are more motivated and prepared to continue in science and mathematics, Wohlberg said. "This translates to a stronger pool of students for tomorrow's workforce which will spur economic development," she added.

International Model

IMSA Excellence 2000+ will be modeled, in part, after the highly successful after-school Mitchell Excellence 2000 enrichment program in Israel for junior high school students "living in the Israeli periphery." The program in Israel is operated by the Society for Excellence Through Education, the organization which operates the Israel Arts and Science Academy (IASA), a "sister school" of IMSA. Representatives of the IASA and the Chicago-based American Friends of the IASA are helping IMSA launch its program for Illinois.

For more information, contact Ann Wohlberg at 630-907-5892 or email wohlberg@imsa.edu.

IMSA FUND BOARD OF DIRECTORS

Chairman

James R. Thompson
*Chairman of the
 Executive Committee
 Winston & Strawn*

Vice President

Robert Malott
*Retired Chairman
 FMC Corporation*

President

Michael J. Birck
*Chairman
 Tellabs, Inc.*

Vice President

William J. White
*Professor
 Northwestern University*

Secretary/Treasurer

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

Directors

G. Carl Ball
*President
 Ball Foundation*

G. Thomas Castino
*President and CEO
 Underwriters Laboratories,
 Inc.*

Dr. Floyd English
*President and CEO
 Andrew Corporation*

Larry Flynn
*Major Accounts Vice
 President
 Nortel*

Peter Fox
*Senior Managing Director
 Bear Stearns and Company*

Dr. Philip Francis
*President
 Mascon Management
 Consulting*

David J. Geary
*Vice President-North America
 Lucent Technologies*

Joanne Hansen
*President
 Hansen-Furnas Foundation*

Leon Jackson
*President
 Multi-Fac Corporation*

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

Steven H. Lesnik
*CEO
 Kemper Lesnik
 Organization*

*Honorary Members

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

Robert M. Malchione
*Vice President
 The Boston Consulting
 Group, Inc.*

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

Andrew M. Oh
*Entrepreneur-in-Residence
 Reactivity*

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

James T. Schaefer
Real Estate Consultant

Honey Jacobs Skinner
*Partner
 Sidley & Austin*

William A. VanSanten
*Partner
 Wood, Phillips, VanSanten,
 Clark and Mortimer*

Josef Wright
*Retired President
 Ameritech Illinois*

Linda Anderson*
Civic Leader

Roger E. Anderson*
*Retired Chairman and CEO
 Continental Bank of
 Chicago*

IMSA Expands Summer Programs for Illinois Students

IMSA will offer four new programs in summer 2001 for younger Illinois students. Applications for the programs will be available in February, 2001.

The four new programs include Science Explorers, Jr., Explorations in Science, Digital Art and German Explorers. Britta McKenna, coordinator of the IMSA Kids Institute, said she is pleased that IMSA is able to offer additional summer programming for younger Illinois students.

"Since 1998, the IMSA Kids Institute has grown to serve 300 Illinois students in the summer and an additional 600 during the school year," said McKenna. "Every year the demand for summer enrichment programming increases so we are extremely pleased to be able to meet that demand in addition to offering a wider variety of programming options."

For more information about the following IMSA summer programs, contact Kathleen Long at 630-907-5041 or email klong@imsa.edu.

SUMMER PROGRAM

DATES

AGE GROUP

Science Explorers, Jr. NEW!!	June 18-22	3-4th Grades
Explorations in Science NEW!!	June 18-22	6-8th Grades
Science Explorers in Chicago	June 25-29	5-6th Grades
Summer Sleuths I	June 25-29	7-9th Grades
Science Explorers in Liberty	July date TBA	4-6th Grades
Summer Sleuths II	July 16-19	7-9th Grades
Science Explorers	July 30-August 3	5-6th Grades
Digital Art NEW!!	July 30-August 3	7-9th Grades
German Explorers NEW!!	July 30-August 3	7-9th Grades



Photo by: Britta McKenna

Members of the Real Science 2001 team enjoy meeting Oberweis owner Elaine Oberweis while making a movie for this year's CD-Rom story: "How to Make Ice Cream."



*Microbiologist Dr. Lynn Margulis presents *The Living Earth from Space* to IMSA staff, students and guests.*



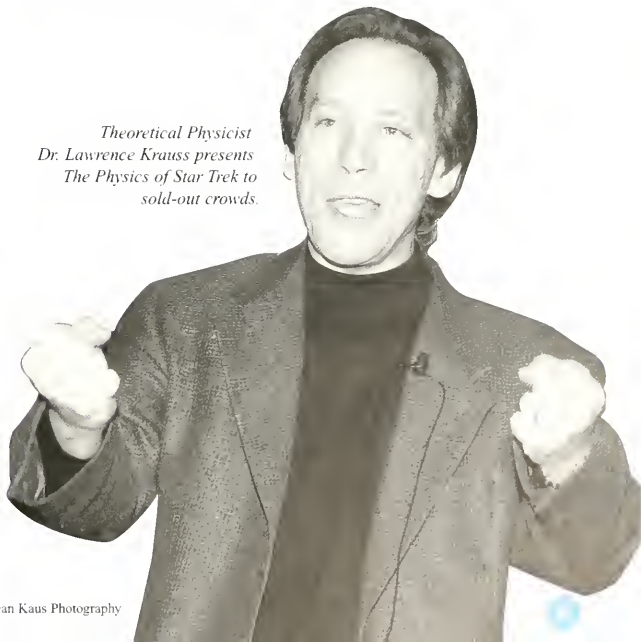
Mathematician Douglas Hofstadter meets in a special small group with IMSA students following his seminar.



IMSA Resident Scholar and Nobel Laureate Dr. Leon Lederman chats with middle school students following Dr. Krauss' lecture.



*Chemist Dr. Luis Nuñez (right) and physicist Dr. Herman White present *Stories of a Scientist* to more than 400 guests.*



*Theoretical Physicist Dr. Lawrence Krauss presents *The Physics of Star Trek* to sold-out crowds.*

IMSA German Teacher Wins Prestigious National Award

IMSA German teacher John Stark recently was named Outstanding German Educator at the annual meeting of the American Association of Teachers of German, Inc (AATG). He is the only high school German teacher in the country to receive the award.

Stark is a charter faculty member at IMSA who began the German program in 1986. At the AATG's Annual Meeting in Boston in November, he was also presented with the Checkpoint Charlie Foundation Scholarship. Both awards are given in recognition of personal innovation, talent, and leadership which reflect uncommon excellence.

The Outstanding German Educator Award has been presented annually since 1989 by the AATG. Recipients are nominated by their chapter presidents in recognition of: service to the language teaching profession; participation in professional organizations; contribution to German language education and continued growth as a German educator.

Three awards are given yearly at the Annual Meeting: one to an elementary, middle or junior high school instructor, one to a high school instructor and one to a college/university instructor.

As a result of winning the award, Stark will receive a one-week Berlin seminar as well as roundtrip transportation



IMSA German Teacher John Stark (second from left) is presented with the Outstanding German Educator award by AATG President Elizabeth Smith, Awards Chairman Christopher Wickham and Alexander Longolius, executive director of the Checkpoint Charlie Foundation.

sponsored by the Checkpoint Charlie Foundation. The Berlin State House of Representatives started the foundation to support friendly German-American ties in the future.

On the national level, he has been one of the AATG professional consultants since 1988. He currently serves on the AATG Technology Task Force and an AATG committee to establish guidelines for National Board of Professional Teaching Standards certification for teachers of world languages. He also

is on the editorial board of *Die Unterrichtspraxis*, a journal devoted to the teaching of German.

Stark has also served as treasurer, vice-president, president and newsletter editor of the Northern Illinois AATG chapter and has been active in immersion days and weekends for teachers and students. In February, Stark will be a co-presenter at an immersion weekend for German teachers on German film instruction in Oregon, Illinois.

IMSA Faculty Members Receive National Teaching Certification; The Highest Standards for the Teaching Profession

IMSA Science Teachers Dr. John Eggebrecht and Dr. Susan Styer have successfully completed all of the requirements to receive certification with the National Board of Professional Teaching Standards (NBPTS).

Eggebrecht, a science teacher at IMSA for nine years and an educator since 1983, was one of only six educators in Illinois to receive NBPTS certification in Adolescence and Young Adulthood/Science. Styer, a science teacher at IMSA for 10 years, formerly worked as a researcher for the government. Styer also received NBPTS

certification in Adolescence and Young Adulthood/Science.

Both Eggebrecht and Styer were among 4,720 primary and secondary school teachers nationwide to complete the rigorous and competitive national certification process that credentials successful candidates as Master Teachers. The success rate is only 51% of those applying for certification.

As part of the National Board Certification process, Eggebrecht and Styer compiled and submitted a teaching portfolio which included videotapes of classroom teaching, lesson plans, student

work samples and reflective written commentaries that detail what they, as teachers, were doing and why. They also had to complete an assessment involving a series of written exercises designed around challenging teacher issues such as curriculum design, student assessment and content knowledge.

The National Board for Professional Teaching Standards, founded in 1987, is an independent, nonprofit, nonpartisan and non-governmental organization dedicated to raising the level of teaching excellence in classroom throughout America.

Professional Contributions

Recent examples include:

IMSA President **Dr. Stephanie Pace Marshall** presented The Learning Story of the Illinois Mathematics and Science Academy for the presidential session at AECT in Denver.

Dr. Raymond Dagenais, curriculum and assessment leader in science, is the National Chairperson for the National Staff Development Council's Mentoring Applications Network. As part of his responsibilities, he facilitated a dialogue regarding the mentoring experience and programs at the National Staff Development Council Conference in Atlanta, GA.

Dr. Steve Cordogan presented Determining the Impact of Educator Professional Development Programs Using a Hierarchical Assessment Level Model at the American Evaluation Association's Evaluation 2000 Conference.

Russian teacher **Julia Husen** received the 2000 Lieutenant Governor's Award for Contributions to Foreign Language Learning, in the category of Exemplary Teaching and Training. This award is given to select educators for contributions to foreign language learning in ways that are distinctly exceptional.

Coordinator for Strategic Initiatives **Dr. Susan Bisinger** presented Quality Criteria for Professional Development to the Alliance for Illinois Education at Illinois State University in Bloomington and to the Illinois Council of Teachers of Mathematics in Springfield.

Dr. Linda Brazdil, coordinator of the Smithsonian Research and Diffusion Network at IMSA, presented Carbon Dioxide Chemistry during a one hour hands-on program at the SciTech Museum in Aurora.

Math teacher **Don Porzio** presented Equation Solving in the TI-89 at the National Council of Teacher of Mathematics Eastern Regional meeting in Mass.

Math teacher **Ruth Dover** presented AP Calculus for a College Board workshop at Otterbein College in Ohio.

Math teacher **Dr. Michael Keyton** presented How Many Centers Does a Triangle Have? to high school teachers at Texas A&M University in Texarkana, Texas.

Dr. Steven Rogg, coordinator of professional development and research, presented IMSA 2061 Partnership at the annual meeting of the Illinois Council of Teachers of Mathematics (ICTM) in Springfield.

The following staff members presented at the Illinois Association for Supervision and Curriculum Development (ASCD) Annual Fall Conference. They are: **Skip Mosshamer**, database team leader, and **Guy Todnem**, professional development and research coordinator, How to Conduct Quality Action Research: Improving Student Learning through Teacher Learning; and **Robert Brazzle**, professional development leader for Project 2061, Tools and Strategies for Achieving Standards.

Director for Development of On-line Resources **Dr. David Barr** presented Evaluating Web Resources at the Illinois Educational Technology Conference in Springfield.

Director of Enrollment Services **Dr. LuAnn Smith** was part of a panel discussion on Counseling the Gifted Adolescent held at Hubble Middle School LLC in Wheaton.

College/Academic Counselor **Joe Prieto** presented a session on the college selection and financial aid process for the senior class at Plano High School.

Music teacher **Dalia Bach** conducted a reading of music for Treble Choir at the 2000 Fall Convention of the American Choral Directors Association Illinois Chapter at Wheaton College.

Art teacher **Clay Sewell** presented a workshop on Ceramic Handbuilding Techniques at Waubensee Community College.

Student Achievements

Recent examples include:

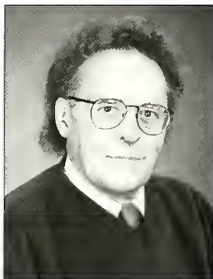
Pooja Agarwal of Chicago, **Roy Droste** of Grafton, **Shijun (Cindy) Xi** of Naperville and **Margarat Wat** of Naperville presented Kids Institute: Empowering High School Students to be Electronic and Classroom Teachers of Science at the National Association of Biology Teachers 2000 Conference in Orlando, FL. Coordinator of Advancement Initiatives **Britta McKenna** also presented.

Winn Wason of Dixon explored his family's genealogy as it related to historical events such as World War I and II, the American Revolution and the Civil War. His research was published in the October 2000 edition of Biographies 2000: Through the Years.

Kelly McArdle of Elmwood Park and **Anson Tang** of Quincy presented Neonatal Perinatal Factors in Predicting the Clinical Course of Triplet Births at 34 Weeks Gestation at the annual meeting of the American Academy of Pediatrics in Chicago.

Hyun-Joo Park of Danville, **Amanda Raddatz** of Alsip, **Mathew Knisley** of Greenfield, **Katherine Dieber** of Oak Park, and **Jonathan Feehan** of East Moline attended the 13th annual NCSSSMST Student Conference in Grand Rapids, MI.

Yogesh Raut of Springfield was one of only three college-bound students in Illinois and one of 12 in the U.S. to achieve a 36, the highest possible composite score on the June 2000 administration of the ACT Assessment Test. About 32,000 Illinois students and 357,600 from across the nation completed the ACT college-entrance exam in June.



This issue of NOVA is dedicated in loving memory of Charter faculty member

Bernard C. Hollister

1938-2000

Bernie was a pioneering leader in IMSA's social science and history program, problem-based learning, CADRE system for faculty development and accountability and cocurricular activities program. We will forever cherish the memory and legacy of this remarkable teacher who inspired the hearts and minds of so many students.



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 Office of
Institutional Advancement and
Public Policy at (630) 907-5033.*

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

IMS A Online Learning Programs Expand: IMS A Takes Lead in Illinois Virtual High School Project

IMS A Online Learning Programs continue to expand throughout Illinois and will now include “anytime and anyplace” access to training in the use of IMS A’s Internet Toolkit. In addition, IMS A continues to play a key leadership role in the development of the Illinois Virtual High School, an initiative of Governor George H. Ryan governed by the Illinois State Board of Education.

throughout Illinois. They included subjects such as Advanced Placement Macro and Microeconomics, Spanish 1 & 2, Latin 1, Practical Keyboard and Business Skills and Precalculus 1 and 2. A total of 88 students representing 32 high schools in 40 cities registered for 14 of the sections. In the fall of 2001, more than 60 will be offered with a maximum of 25 students per section allowed.

capabilities between teachers and students or between students and students,” Wicks said.

There are currently less than 10 states that are implementing some type of Virtual High School but nearly all states are investigating its implementation at some level according to Wicks.

Internet Toolkit Named Official Digital Resource for IVHS

In addition to IMS A’s leadership involvement with the IVHS project, IMS A’s Internet Toolkit is now an official “digital resource” for IVHS students.

IMS A’s Director for Development of On-line Resources Dr. David Barr said that the Toolkit offers students and teachers software tools and learning materials to help them find, evaluate and use Internet information resources more effectively.

(Continued on page 3)



Illinois Virtual High School
Furthering the state of learning

IMS A Leads Development of Illinois Virtual High School

Matt Wicks, IMS A director of virtual learning and co-chair of the Illinois Virtual High School (IVHS), said that in the next year, IMS A will play an even bigger role in its development.

“Currently in the pilot year of the IVHS, IMS A Science Teacher Dr. John Eggebrecht teaches the online Physics 1 course but that will expand next year to also include courses in IMS A’s Calculus-based Physics, Assembly Language Programming and Astrophysics,” Wicks said.


The initial pilot of the Illinois Virtual High School, launched in January, offered 16 sections to students

Although the expansion of courses is rapid, Wicks is quick to point out that the IVHS is not meant to replace the current high school environment.

“The IVHS was created to *supplement* and *complement* current high schools and not to be a full-fledged high school that issues diplomas,” Wicks said. “Socialization will always be an important role that high schools play.”

In addition to helping provide equal access to courses for all Illinois students, the IVHS also has other learning advantages.

“The IVHS offers students threaded discussion boards, chat rooms, journaling capabilities and document-sharing

	
AJAS/AAAS Research Conference	6
Alternative Certification Program	8
IMS A OnLine Learning Program	6
From an IMS A Education Partner	2
Great Minds Program	5
In Memorium	8
Neuroscience Research Prize	3
Summer Program Registration	4
News In Brief	7



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

BOARD OF TRUSTEES

Chairman

John H. McEachern Jr.
President
Wayne Circuits Incorporated

1st Vice-Chairman

Sheila MB Griffin
Vice President and Director
Strategic Marketing Office
Motorola Incorporated

2nd Vice-Chairman

Dr. Luis Nuñez
Chemist
Separation Science and Technology Section
Argonne National Laboratory

Trustees

Dr. Joseph Cipfl
Executive Director
Illinois Community College Board

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

Dr. Forest Etheredge
Dean
School of Business and Professional Studies
Aurora University

Steve Isoye
Curriculum Leader for Science
Warren Township High School

Dr. Glenn "Max" McGee
State Superintendent
Illinois State Board of Education

Kevin Murphy
Science Teacher
Lyons Township High School

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

Dr. Marsha R. Rosner
Director
The Ben May Institute for Cancer Research
The University of Chicago

Dr. Keith Sanders
Executive Director
Illinois Board of Higher Education

Jesus Manuel Sosa
Administrator
Chicago Public Schools, Region One

Sharon Tenhouse
Teacher and Parent Educator
Community Unit School District #2 (Liberty, IL)

Dr. Alfonso Thurman
Dean, College of Education
Northern Illinois University

Dr. Michael S. Turner
Department Chairman
Department of Astronomy & Astrophysics
The University of Chicago

President

Dr. Stephanie Pace Marshall

NOVA is published three times a year by the
IMSA Office of Advancement and Public Policy.

Send comments or questions to:
Editor and Writer
Brenda Buschbacher
brenda@imsa.edu

From an IMSA Partner in Education



Dear IMSA Shareholders,

As a partner with IMSA in the newly-launched Alternative Teacher Certification Program in Science (see back cover), I am delighted to write to you about the important role IMSA is playing to help transform science teaching and learning throughout Illinois.

I can see firsthand the contributions IMSA is making to institutions of higher learning in Illinois and the impact partnerships such as ours will have on future student academic success.

Our program in particular addresses the impending Illinois teaching shortage. Benedictine University, in partnership with IMSA, will begin training candidates for an accelerated alternative teacher certification program this summer. The program is designed for qualified individuals who are interested in teaching middle or high school science and who have at least a bachelor's degree with five years experience in a science-related field.

The Benedictine University/IMSA partnership has produced a true alternative route to certification-unique, not only because of the accelerated time frame, but also because of the method, problem-based learning, by which pedagogical content will be delivered. The employment of the PBL methodology carries the added bonus of providing participants with the skills and knowledge necessary to include this in their own instructional repertoires.


Finally, I would like to say that I am greatly impressed by the other professional development programs and services for teachers IMSA provides through the Center@IMSA, as well as its enrichment programs for other Illinois students. IMSA's statewide reach and impact are significant – and the people of Illinois are the beneficiaries.

It is truly my pleasure to work in collaboration with IMSA and I wish to thank you, the shareholders in the public and private sectors, for supporting the very important work of the Illinois Mathematics and Science Academy.

Sincerely,

Dr. Harry Trumfio
Director of Alternative Certification Programs
Benedictine University
Lisle, Illinois

IMSA Online Learning Programs Expand: (continued from cover)



The Internet Search Wizard @ IMSA

SEARCH spelling thesaurus evaluation citation safety FAQ project tips

Search "The Toolkit's Internet Search Wizard allows students to save time and explore a wider range of resources by searching multiple engines simultaneously," Barr said. It also makes it easier for students to target a smaller number of relevant documents on the web.


Location

Language

Date

For example, if students wanted to find pictures of Mars from NASA's space exploration project, they could execute a search *only* using the government search domain (.gov) and could specify that they wanted only documents that contain pictures as well as text.

The Toolkit includes software that helps students evaluate the credibility of the documents retrieved. "As more and more information becomes available on the Internet, it is becoming increasingly important that students understand how to identify quality information resources," Barr added.



IMSA Student Named National Finalist in Two Research Competitions; Only High School Student in Competition's History to Win Undergraduate Research Fellowship

IMSA senior Margarit Wat of Naperville was named one of 10 national finalists in the Neuroscience Research Prize competition sponsored by the American Academy of Neurology. In addition, she also was named one of 12 national recipients of the Summer 2001 Undergraduate Research Fellowship sponsored by the American Society for Pharmacology and Experimental Therapeutics, Inc. She is the *only* high school student to win the award in the history of the competition.

Wat's research work, entitled *Effects of Long-term Light Exposure on Expression of mCLOCK*, was conducted as part of her mentorship at Northwestern University Medical School under the guidance of mentor Dr. Margarita Dubocovich. Mentorship is a part of the IMSA Student Inquiry and Research Program (SIR), which challenges students to engage in scholarly and scientific investigation, as well as creative and artistic expression.

Neuroscience Research Prize

In the Neuroscience Research Prize competition, Wat's research work was judged using multiple criteria including relevance to neuroscience, creativity, scientific method, interpretation of data, research reports and communication

skills. All entries were reviewed by a panel of physicians and scientists who are actively engaged in neuroscience research at academic institutions throughout the United States.

The purpose and objective of the Neuroscience Research Prize was to encourage high school students to

explore the world of the brain and nervous system, and to reward students whose scientific skill and talent indicate potential for scientific contributions in the field of neuroscience.

ASPET Research Fellowship

In addition to the Neuroscience Research Prize, Wat was one of only 12 recipients of the 2001 Summer Undergraduate Research Fellowship sponsored by the American Society for Pharmacology and Experimental Therapeutics, Inc. She is also the *only* high school student in the history of the competition to win the award.

The purpose of the fellowship is to introduce undergraduate students to pharmacology research in order to heighten interest in science as a career, with an emphasis on pharmacology graduate training.

Candidates were judged based on the quality of the laboratory of the sponsor (the sponsor's track record in research and level of grant funding), the quality of the applicant and an assessment of the reviewers of the level of interest of the student in graduate training in pharmacology.

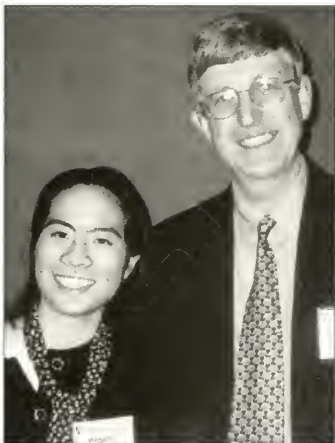


Photo courtesy of AAAS

IMSA student Margarit Wat had the once-in-a-lifetime opportunity to meet with Dr. Francis Collins, director of the Human Genome Project, during the AAAS/AJAS Annual Conference in February where she presented the results of her research.

IMSA FUND BOARD OF DIRECTORS

Chairman
James R. Thompson
*Chairman of the
Executive Committee*
Winston & Strawn

Vice President
Robert Malott
Retired Chairman
FMC Corporation

President
Michael J. Birck
Chairman
Tellabs, Inc.

Vice President
William J. White
Professor
Northwestern University

Secretary/Treasurer
Susan S. Schanlaber
President
The Landmark Group, Inc.

Directors

G. Carl Ball
President
Ball Foundation

G. Thomas Castino
President and CEO
Underwriters
Laboratories, Inc.

Dr. Floyd English
President and CEO
Andrew Corporation

Larry Flynn
*Major Accounts Vice
President*
Nortel

Peter Fox
Senior Managing Director
Bear Stearns and Company

Dr. Philip Francis
President
Mascon Management
Consulting

David J. Geary
Vice President/North America
Lucent Technologies

Joanne Hansen
President
Hansen-Furnas Foundation

Leon Jackson
President
Multi-Fac Corporation

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

Steven H. Lesnik
CEO
Kemper Lesnik
Organization

*Honorary Members

Richard Lumpkin
Chairman and CEO
Consolidated
Communications, Inc.

Robert M. Malchione
Vice President
The Boston Consulting
Group, Inc.

Timothy McCormick
Vice President
Farmer's State Bank
of Emden

Andrew M. Oh
Entrepreneur-in-Residence
Reactivity

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

James T. Schaefer
Real Estate Consultant

Honey Jacobs Skinner
Partner
Sidley & Austin

William A. VanSanten
Partner
Wood, Phillips, VanSanten,
Clark and Mortimer

Josef Wright
Retired President
Ameritech Illinois

Linda Anderson*
Civic Leader

Roger E. Anderson*
Retired Chairman and CEO
Continental Bank of
Chicago

Vice President for Advancement
Catherine C. Veal

IMSA Seeking Student Applicants for Summer Programs

Registration is underway for an array of summer youth programs held at IMSA, Chicago and Liberty, IL. IMSA offers summer day programs in science, technology and the arts for students in grades 3-9. The summer program brochure can be downloaded at www.imsa.edu under "What's new?" - IMSA Kids Institute or mailed by calling 630/907-5956. Programs fill quickly and may already be full by the time of this article.

Registration is now open for the following summer programs:

SUMMER PROGRAM	DATES	AGE GROUP
Science Explorers, Jr.	July 30 - August 3	3-4th Grades
Science Explorers at IMSA	June 18-22	5-6th Grades
Science Explorers in Chicago at Walter Payton High School	June 25-29	5-6th Grades
Science Explorers in Liberty at Liberty High School	July 9-13	4-6th Grades
Explorations in Science	June 18-22	7-8th Grades
Summer Sleuths	June 25-28	7-9th Grades
Summer Sleuths	July 16-19	7-9th Grades
Digital Art	July 30-August 3	7-9th Grades
German Explorers	July 30-August 3	7-9th Grades

Summer programs at IMSA are supported in part by IMSA, American Honda Foundation, 3M, Best Buy Children's Foundation and corporate partners. In addition, scholarships for each program are available based on an individual's financial need.



Photo by: Britta McKenna

IMSA Excellence 2000+ (E2K+) teachers use astrolabes to track the angle of a 2-liter bottle water rocket in order to determine its altitude. The teachers visited IMSA as part of curriculum professional development for the E2K+ program.

"Printed by Authority of the State of Illinois,
6500 04/01, Purchase Order No. 210345."



IMSA Resident Scholar Dr. Leon Lederman, Patent Attorney Mr. Charles Laff and Dr. Brian Spears, Director of Pharmacogenetics at Abbott Laboratories presented the Great Minds Dialogue "Science, Law and Technology" January 24 at IMSA.

Mr. Andrew "Flip" Filipowski, CEO and Chairman of Divine Interventures answers questions from students and staff during a Great Minds Program Entrepreneur Seminar at IMSA January 30.



Dr. Brian Spears, Director of Pharmacogenetics at Abbott Laboratories.



IMSA Alum Sam Choi, Founder and Chief Operating Officer of Visible Markets, Inc., meets with current IMSA students following his participation in the Entrepreneur Seminar January 30.

Mr. Nicholas Pritzker, Chairman and CEO of Hyatt Development Corp. and Hyatt Equities, served as a panelist during the Entrepreneur Seminar and Dialogue January 30.



Former U.S. Senator Paul Simon, Director of the Public Policy Institute at Southern Illinois University, presented "Leading for a Change" as part of The Hollister Lecture Series on January 31. The series is held in memory of Charter Faculty Member Bernard Hollister in conjunction with the Student Leadership Development Symposium.

IMSA Represents Illinois at Science Conference

Eleven IMSA students represented the Illinois Junior Academy of Science in conjunction with the AJAS/AAAS Annual Meeting and Science Innovation Exposition February 14-18 in San Francisco, CA.

Students from IMSA made oral and poster presentations on their research projects as representatives of the Illinois Junior Academy of Science. In conjunction with the annual American Association for the Advancement of Science (AAAS) meeting, the American Junior Academy of Science (AJAS) showcases the work of promising future scientists who represent their state Junior

Academies from across the nation.

IMSA students conducted their research in mentorship, a part of IMSA's Student Inquiry and Research Program (SIR). The SIR Program challenges students to engage in scholarly and scientific investigation, as well as creative and artistic expression. This process culminates in the exhibition of products of ethical research, study and creativity. IMSA students who presented their research at AJAS conducted their mentorships under the guidance of mentors at Loyola University Medical Center and Northwestern University Medical School.

IMSA Research Presenters

2001 AAAS Annual Meeting and Science Innovation Exposition

Anuoluwa Adeboje (Dolton) and Fatima Hatia (Bloomington)
Specific Serotonin Receptor Stimulation in the Hypothalamus

Lisa Kelly (Libertyville)
Immortalization of Human Diploid Fibroblast Cells by Telomerase

Hannah Koh (Naperville)
Identification and Characterization of Multicopy Suppressors of Vpr Induced Cell Death

Kelly McArdle (Elmwood Park) and Anson Tang (Quincy)
Trends in Triplet Susceptibility to Complications

Ashwin Shetty (Naperville)
The Effect of Glycoprotein IIb/IIIa Inhibitors on Agonist - Induced Platelet Activation

Anupama Topgi (Palatine)
Resurgent Sodium Current and Action Potential Formation in Cerebellar Unipolar Brush Cells

Christine Tsai (Naperville)
Antibody Labeling of Tau Polymers as Probes for Tau Structure in Alzheimer's Disease

Margarat Wat (Naperville)
Effects of Long-term Light Exposure on Expression of mCLOCK

Debra Yoo (Schaumburg)
The Regulation of Phospholipase C delta-1 by Neuronal Calcium Sensor 1



Photo courtesy of AAAS

IMSA Resident Scholar Dr. Leon Lederman takes time out from the AAAS Conference to meet with some of the IMSA students in attendance.

Internet Toolkit Training Goes On-line

This spring, thanks to a \$50,000 grant from the Illinois Department of Commerce and Community Affairs (IDCCA), IMSA began online training workshops in Digital Information Literacy for 50 Illinois educators.

Workshop topics include how to develop successful search strategies, how to explore the "invisible" web, how to apply copyright laws to web materials,

how to cite web-based resources appropriately, and how to incorporate multi-media resources into documents.

In addition to using the Toolkit to help participants sharpen their Internet information skills, the course reflects IMSA's core competencies of being problem-centered, inquiry-based and integrative and is aligned with state and national standards.



Barr said he is pleased to be able to offer Toolkit training online, a more far-reaching and cost-effective option to on-site training. Plans are already underway to continue expanding training in the coming months.

"In the Fall of 2001, we will be offering a full semester 3-credit online course in Digital Information Literacy," Barr said.

Professional Contributions

Recent examples include:

Dr. Raymond Dagenais, curriculum and assessment leader in science, was elected to a two-year term as Vice-President of the Illinois Science Teachers Association.

Mentorship Coordinator **Dr. Peggy Connolly**, presented *Masters of the Universe or Demolition Derby? – The Human Genome Project’s Human Impact: Sequel to the Sequence* as the keynote speaker for the Illinois Council on Family Relations 51st Annual Conference.

Math teacher **Susan Eddins** co-published *NCTM’s Principles and Standards for School Mathematics: Implications for Administrators* in the National Association of Secondary School Principals publication **BULLETIN** in March 2001.

Math teacher **Don Porzio** presented *TI-89 Activities and Implementation Ideas for AP Calculus* at the annual National Council of Teachers of Mathematics (NCTM) conference.

College and Academic Counselor **Joe Prieto** co-presented *Counseling the 1st Generation College Bound* at the College Board Midwest Regional Conference. In addition, Prieto also co-presented *Websites that Work* with IMSA seniors **Charlotte Haley** of Clifton and **Lance Hall** of Walnut. Athletic Director **Glenn Schwartzwalder** moderated the session *College Athletics and Institutional Values: Sending a Consistent Message*.

Director of Virtual Learning **Matt Wicks** presented the *Illinois Virtual High School Initiative* at the 2001 Peoria County Educator’s Professional Day.

Music teacher **David Deitemyer** accepted a commission to compose music celebrating the retirement of Chicago-area band director Arthur Beckman. Deitemyer incorporated melodies into an original composition titled *Fantasy on ‘Dos Colors.’*

Director for Development of On-line Resources **Dr. David Barr** presented *IMSA’s Internet Toolkit* for an inservice day of 200 teachers in Coal City, IL.

Debra Gerdes, professional development and research coordinator, co-presented *Problem-Based Learning in Teacher Development* for a symposium sponsored by the Chicago Collaborative for Excellence in Teacher Preparation.

Science teacher **John Thompson** presented *IMSA: Another School in Your Neighborhood* to the Plainfield Rotary Club.

Math teacher **Ruth Dover** presented a two-day workshop, *Mathematics Vertical Teams*, for the College Board and Chicago Public School in Chicago.

Several math teachers presented sessions at the annual Metropolitan Mathematics Club 2001 Conference of Workshops on Implementing Principles and Standards for School Mathematics. They were **Steve Condie**, **Chuck Hamberg**, **Michael Keyton**, **Michael Sloan**, **Don Porzio** and **Ruth Dover**.

Robb Gill, residential life coordinator and head track and field coach, participated in an Olympic 2000 Surf-Lifesaving exhibition event the week before the opening of the games in Melbourne, Australia. His team placed 21 out of 29 in the four-man division. Gill is a nationally ranked sprint kayaker.

Student Achievements

Recent examples include:

A paper submitted by **Justin Blanchard** of Naperville, **John Carrino** of Marseilles, **Bradley Kay** of Aurora, and **Nicholas Rupprecht** of Gurnee received the rank of National Outstanding in the third annual High School Mathematical Contest in Modeling (HiMCM).

Margaret Wat of Naperville was one of 21 finalists in the Chicago Junior Science and Humanities Symposium.

Seven IMSA students were among only 175 nationwide named as semi-finalists for the United States Physics Team based on results from the Preliminary Qualifying Examination. They are **John Carrino** of Marseilles, **Jared Kaplan** of Lemont, **Zhihao Liu** of Lisle, **Jacobus Machalow** of Matteson, **Thomas Rooney** of Naperville, **Nicholas Rupprecht** of Gurnee, and **Xiao Tsai** of Machesney Park.

IMSA captured first place in overall points in this year’s North Suburban Math League competition. **Dan Gulotta** of Naperville, **Zhihao Liu** of Lisle and **Ying Shi** of North Aurora scored perfect papers at the conference meet. Senior **Nicholas Rupprecht** of Gurnee was the high scorer in the first four meets in the Oralist category.

Yogesh Raut of Springfield was recognized as the top high school Scholastic Bowl player in Illinois after participating with 180 other high school students in the Ultimate Scholar Bowl at Illinois Wesleyan University.

IMSA students won 13 gold medals and eight silver medals in the 19th National Russian Essay Contest sponsored by the American Council of Teachers of Russian.

Several students won awards at the Illinois Music Educators Association State Music Festival. They are **Michelle Yong** of Mt. Prospect (Honors Orchestra-1st Violin), **Kevin Yang** of Naperville and **Daniel Sun** of Mt. Prospect (All-State Orchestra), **Kelli Willis** of Lemont and **Laura Davis** of Moline (All-State Choir) and **Micah Dorch** of Washington Park (Honors Choir).

Ecology students **Christ Balich** of Chicago, **Matt Hall** of Milan, **Ann Hinterman** of Park Forest and **Amanda Raddatz** of Alsip presented *The Wolf: Its Ecology and Habitat* to 150 7th graders at Timber Ridge Middle School in Plainfield.

IMSA and Benedictine University Alternative Certification Program

In an effort to help stem the impending Illinois teacher shortage, IMSA has teamed up with Benedictine University (BU) to offer qualified candidates a true alternative route to teacher certification. Candidates are science professionals who are interested in teaching middle or high school science and have at least a bachelor's degree and five years of science-related work experience.

The program will be launched the first weekend of May 2001, with an orientation session for the first cohort of prospective intern science teachers.

The cohort will take part in an eight-week intensive training program from June 11-August 3. During training, interns will address a multitude of teaching issues including the needs of middle school learners, high school learners and special education students. Their training also will include problem-based learning activities that are focused on teaching methods and strategies. Led

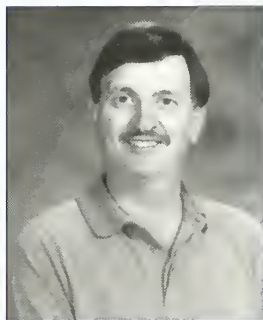
by staff from BU, IMSA and outside experts, examples of topics to be studied include: learning theory, learner characteristics, curriculum, assessment, testing and classroom management.

Upon successful completion of the training program, cohort members will receive a provisional alternative teaching certificate from the State of Illinois, allowing them to enter a full-time teaching assignment in a selected school.

Throughout the year, they will receive ongoing support from a mentor teacher and from BU and IMSA personnel.

The Alternative Teacher Certification Program will be covered in greater detail in future issues of NOVA. For more information about the program, contact IMSA Coordinator for Strategic Initiatives Dr. Susan Bisinger at (630) 907-5989 or email bisinger@imsa.edu.

This issue of NOVA is
dedicated in loving
memory of
Social Science
Faculty Member



Kenneth Guest
1947-2001



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 Office of
Institutional Advancement and
Public Policy at (630) 907-5033.*

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

NOVA

ILLINOIS MATHEMATICS AND SCIENCE ACADEMY

IMSA *A Pioneering Educational Community*

Volume 15 No. 3 • Summer 2001

We'd Like to Hear From You! Please See NOVA Survey Inside!

IMSA Launches Illinois International Career Academy

While other Illinois students were headed to their homes for the summer, 24 global-minded teens headed to IMSA to study international business in the new Illinois International Career Academy.

The International Career Academy (ICA) is administered by IMSA with a grant from the Illinois Board of Higher Education and is the branch of

Governor George Ryan. It is designed to advance the recommendations of the Governor's Joint Task Force on International Education and to help build the workforce the state of Illinois needs to compete successfully in a global economy.

"The ICA clearly enhances the capabilities of Illinois' secondary students to interact effectively in a culturally and linguistically diverse global economy," said IMSA President Dr. Stephanie Pace Marshall.

For 10 days in June, the selected students and six teachers from Bloomington High School, Carbondale Community High School, Glenbrook South High School in Glenview, IMSA, Jones Academic College Prep in Chicago

"By opening doors into business and international affairs, this experience prepares, challenges, and empowers students to make a real difference in the world."

— Dr. Carl Heine, ICA director

Using problem-based learning, students explored the connections among currency valuations, interest rates, supply and demand, and colonization. They also examined the strategic role of oil, politics and religion in the post-World War II era and explored the relationship between political stability and the private sector in world religions.

The total student experience will span three summers and two school years and include an internship with an Illinois multinational company.

In addition to serving as ICA teachers, IMSA Social Science Teachers Michael DeHaven and Dr. Robert Kiely, and Debra Gerdes, IMSA professional development leader

(Cont'd. on page 3)



NATO Secretary-General Lord Robertson meets with ICA students (l-to-r) Brian Link of Algonquin, Linda Vuong of Bloomington, Dupline Ponce of Carbondale, and IMSA Resident Counselor Dan Edson following his presentation in Oak Brook, "NATO's Challenges Illusions and Realities of the Alliance."

and University Laboratory High School in Urbana immersed themselves in the study of international issues. Topics included AIDS in Sub-Saharan Africa, the Economic Crisis in Indonesia, Arms Control in Southeast Asia, Thai Bhat and the Price of Oil and others.

INSIDE

Commencement-Class of 2001	3
Excellence 2000+ Grant	4
IMSA Kids Institute	4
News in Brief	7
NOVA Survey	5
Winn Research Award	8



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

BOARD OF TRUSTEES

Chairman

John H. McEachern Jr.
President
Wayne Circuits Incorporated

1st Vice-Chairman

Sheila MB Griffin
President
Griffin Holdings

2nd Vice-Chairman

Dr. Luis Nuñez
Chemist
Separation Science and Technology Section
Argonne National Laboratory

Trustees

Dr. Joseph Cipfl
Executive Director
Illinois Community College Board

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

Dr. Forest Etheredge
Dean
School of Business and Professional Studies
Aurora University

Steve Isoye
Curriculum Leader for Science
Warren Township High School

Dr. Glenn "Max" McGee
State Superintendent
Illinois State Board of Education

Kevin Murphy
Science Teacher
Lyons Township High School

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

Dr. Marsha R. Rosner
Director
The Ben May Institute for Cancer Research
The University of Chicago

Dr. Keith Sanders
Executive Director
Illinois Board of Higher Education

Jesus Manuel Sosa
Administrator
Chicago Public Schools, Region One

Sharon Tenhouse
Teacher and Parent Educator
Community Unit School District #2 (Liberty, IL)

Dr. Alfonso Thurman
Dean, College of Education
Northern Illinois University

Dr. Michael S. Turner
Department Chairman
Department of Astronomy & Astrophysics
The University of Chicago

President

Dr. Stephanie Pace Marshall

NOTA is published three times a year by the
IMSA Office of Advancement.

Send comments or questions to:
Editor and Writer
Brenda Buschbacher
brenda@imsa.edu

From an IMSA Partner in Education



Dear IMSA Shareholders,

On behalf of the 114 institutional members of the Illinois Consortium for International Education (ICIE), it gives the public and private universities and colleges of Illinois great pleasure to have worked with IMSA to conceptualize and implement the International Career Academy (ICA). Then Lt. Governor George Ryan began talking in the 1980s of *international high schools and an international career academy* to develop a workforce to help Illinois companies meet the challenges of a global marketplace. IMSA has made a significant contribution to international workforce preparation in Illinois.

Once again IMSA, renowned as a training ground for top scientific students, has proven its flexibility by delivering the ICA program. Using the methodology of problem-based learning, by which IMSA has distinguished itself in scientific education, its multi-talented staff crafted a premier program designed to help students understand global interdependency in international relations by examining real problems being faced by the global community and our state.

The significance of secondary students developing interest in languages and knowledge of the international dimension is multi-faceted. From the viewpoint of higher education, we realize that our next generation of international scholars must develop interest in things international prior to entering college. The ICA provides stimulation in the international dimension, which will translate into advanced studies on international problems ranging from business to environmental issues.

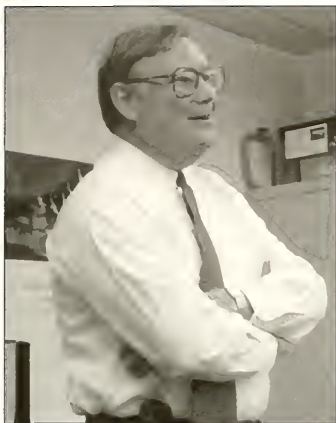
As we embark upon the second phase of international education for secondary students, the development of *international high schools*, higher education looks forward to using the techniques IMSA has used for improving teacher training in math and science, for the purpose of improving teaching and learning in the international dimension.

The post-secondary institutions represented in ICIE look forward to a continued partnership with IMSA to enhance the availability of our expansive international resources to Illinois students and teachers.

Sincerely,

Dr. James Osberg
Executive Director
Illinois Consortium for International Education

International Career Academy: (continued from cover)



in problem-based learning, also designed its curriculum, which includes professional development in PBL for the students' faculty sponsors.

"By opening doors into business and international affairs, this experience prepares, challenges, and empowers students to make a real difference in the world," according to Dr. Carl Heine, ICA director.

"As an institution that serves students and teachers throughout Illinois, IMSA is proud to administer this initiative on behalf of the Governor and the Board of Higher Education, and we look forward to the benefits it will produce for Illinois," Marshall said.

IMSA Associate Director of External Student Programs Laurie Sutherland contributed to this story.

Governor George Ryan's Chief of Staff Robert Newton visited IMSA on June 20 to address the students, faculty and staff of the Illinois International Career Academy. He encouraged the students not to think only about careers in business, but also in education, government and volunteer organizations, all of which will benefit from international education.

Kielburger Tells Class of 2001 to Be "Shamelessly Idealistic"

When Marc Kielburger was only 18 years-old, he had a baby, chronically ill with AIDS, die in his arms. During that same year, he also met a 12 year-old boy who didn't know the meaning of the word "school." These experiences as a youth forever changed his life.

On June 2, Kielburger shared those experiences and his words of wisdom during his commencement address to the 224-member Class of 2001 at the Paramount Arts Centre in Aurora.

Kielburger, now 24 years old, is executive director of Free the Children USA. He has helped to empower and inspire other youth to make a difference in the lives of others through leadership training. IMSA's seniors have participated in Kielburger's training through the IMSA Student Leadership Development program, 12 of whom have become certified trainers in leadership education.

"Future generations will judge you by what you've contributed to others on a local, national and international level," he said. "You have to act to give back."

Pooja Agarwal of Chicago and Winn Wasson of Dixon were the student speakers.



Photo by: Dean Kaas Photography

Impressive Service and Leadership to Illinois

All members of the Class of 2001 contributed at least 80 hours of community service to Illinois. However, the Class' cumulative hours totaled more than 24,000 with 75 students completing 100 or more hours, seven students completing more than 200 hours and six students completing more than 300 hours.

Seniors Anitra Sumbry of Aurora contributed more than 400 hours and Jen Peck of Woodridge contributed more than 900 hours.

IMSA grad Shavion Scott of East St. Louis shares a proud moment with family members.

In addition to community service involvement, IMSA's seniors also served in significant leadership roles including working with children in Chicago's Cabrini Green through the Chicago CYCLE Program and designing and editing the *Real Science* CD-ROM for use with elementary students in 600 schools throughout Illinois.

"Like their predecessors, these students have been pioneers, helping to shape the commitments and spirit of the Academy and helping to advance our institution's leadership role in Illinois and American education," Dr Marshall said.

IMSA FUND BOARD OF DIRECTORS

Chairman

James R. Thompson
Partner and Chairman of
the Executive Committee
Winston & Strawn

Vice President

Robert H. Malott
Retired Chairman & CEO
FMC Corporation

President

Dr. Philip H. Francis
Managing Partner
Mascon

Vice President

William J. White
Professor
Northwestern University

Secretary/Treasurer

Susan S. Schanlaber
President and CEO
The Landmark Group
of Companies

Directors

Michael J. Birck
Chairman
Tellabs, Inc.

G. Thomas Castro
Vice Chairman of
the Corporation
Underwriters
Laboratories, Inc.

Dr. Floyd L. English
Chairman
Andrew Corporation

Peter B. Fox
Founder
Fox Development Company

David J. Geary
Vice President and General
Manager Convergence
Solutions
Lucent Technologies

Joanne B. Hansen
President
Hansen-Furnas Foundation

Leon Jackson
President
Multi-Fac Corporation

James R. Lancaster
Retired Executive
Vice President
First Chicago NBD Corp.

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

Andrew M. Oh, '89
Associate-Equity Research
JP Morgan Chase

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

James T. Schaefer
Real Estate Consultant
(Retired)

Honey Jacobs Skinner
Partner
Sidley & Austin

William A. VanSanten
Partner
Wood, Phillips, VanSanten,
Clark and Mortimer

Joset Wright
Retired President
Ameritech Illinois

Linda Anderson*
Civic Leader

Roger E. Anderson*
Retired Chairman and CEO
Continental Bank of
Chicago

*Honorary Members

Vice President for Advancement, IMSA

Catherine C. Veal

"Printed by Authority of the State of Illinois,
6500 08/01, Purchase Order No. 763."

Harris Family Foundation Pledges \$933,500 for IMSA Excellence 2000+

The Harris Family Foundation recently pledged \$933,500 over three years to support the expanding IMSA Excellence 2000+ Program. This is the largest gift the IMSA Fund for Advancement of Education has received from a private investor.

Launched at the request of the Illinois General Assembly in January, the IMSA Excellence 2000+ Program is an after-school enrichment program for Illinois middle school students who are talented, interested and motivated in mathematics and science, with special emphasis on students who are historically underrepresented and underserved in mathematics and science. Currently the

E2K+ program has school sites in Belleville, Champaign, Chicago, Danville, DesPlaines, Hillsboro, Kankakee, Marion, Oswego, Quincy, Rockford and Springfield.

"The Harris family has been a longtime supporter of IMSA's work and we are grateful for their vision and support of educational opportunities for Illinois students and teachers," said Catherine Veal, vice president for advancement.

In addition to the grant from the Harris Family Foundation, IMSA also received a \$50,000 grant from the Pritzker Foundation and a \$10,000 grant from the Charles and Ruth Levy Foundation for the IMSA Excellence 2000+ program.

IMSA Kids Institute Expands Offsite and Online

by Britta Wilk McKenna, IMSA Kids Institute Coordinator

This year the IMSA Kids Institute complemented our IMSA campus programs with new outreaches and uncharted territory – regional expansion and online access. Pilot expansion efforts were innovative, challenging and most of all, rewarding.

This summer, *Science Explorers* expanded into Chicago and Liberty. Little

did I know that the offsite work would be a study in contrasts; *kids* are the only constant. No matter the size or location of the city, kids love to learn and are eager to get their hands on science.

Mars Online was a feature of our summer *Science Explorers* curriculum and with the help of IMSA alumnus Jonathan Berger '00, we prototyped a dynamic website that hosted sixteen

lessons for upper elementary school classrooms. Eight East and West Aurora schools participated in the Mars Online pilot for 100 students, which culminated in a Mars Fair held at IMSA in May attended by more than 200 participants, parents and educators.

(Cont'd. on page 7)



Photo by Britta McKenna

A "Junior" *Science Explorers* participant dissects an owl pellet.

NOVA Reader Survey

In an ongoing effort to make NOVA interesting and relevant to our readers, the Illinois Mathematics and Science Academy's Advancement Office would like to hear from you. Simply complete the following survey below. Then just fold, tape (DO NOT STAPLE!) and mail it back to us (postage already paid) by November 1, 2001. Thank you for your response!

1. NOVA is:

- too long too short a good length

2. NOVA:

- usually tells me about the IMSA activities, events and issues I would like to read about.
 usually tells me about the IMSA activities, events and issues I **DO NOT** want to read about.

I would rather read about: _____

3. I enjoy:

- articles about innovative academic programs at IMSA
 articles about student leadership
 articles about IMSA research initiatives
 Guest letter to readers
 articles about IMSA's external programs and IMSA's work with other Illinois schools
 articles about IMSA "happenings" (grants, awards, special lectures)
 the News In Brief section (examples of individual achievements and presentations)
 All of the above

4. I would prefer to receive NOVA:

- Every other month (shorter format) Twice a year
 Three times a year Online

5. I would like more information about IMSA's:

- Professional development programs
 Admissions programs (for residential program)
 Programs for Illinois elementary and middle school students
 Giving Opportunities

6. When I receive NOVA, I usually (check all that apply):

- route/share with others read most of the articles
 scan it for articles of interest to me To be honest, I usually discard it without reading it
 scan/read headlines and /or pictures and captions

7. Since receiving NOVA, my opinion of the Academy is:

- unchanged more positive less positive

8. I am a:

- Friend Parent* Government Official Educator
 Business Representative Board Member* Alumnus/a IMSA Staff*
 Other _____

*current or past

9. I would like:

- a presentation on IMSA programs in my hometown
 a presentation on IMSA programs for my organization

Please contact Brenda Buschbacher at
630-907-5033 if you are interested
in featuring IMSA at your next event!

(over)

- Please keep me on the mailing list for IMSA's newsletter, NOVA.
- Sorry, but I would prefer to be taken off of the mailing list for IMSA's newsletter, NOVA.

Name (optional) _____

Address (optional) _____

Phone Number (optional) _____

e-mail (optional) _____

FOLD



BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO. 145 AURORA IL

POSTAGE WILL BE PAID BY ADDRESSEE

NO POSTAGE
NECESSARY
IF MAILED
IN THE
UNITED STATES



THE ILLINOIS MATHEMATICS AND SCIENCE ACADEMY
OFFICE OF ADVANCEMENT
1500 W. SULLIVAN RD
AURORA IL 60506-9503



FOLD

TAPE HERE

Professional Contributions

Recent examples include:

IMSA President **Dr. Stephanie Pace Marshall** presented *If I Could Make a School* to an international group of students in creating the school of the future at the International Society for Technology in Education Student Technology Leadership Symposium June 23-24 in Chicago. In addition, she presented *The Call for a New Story of Learning* at the Executive Leadership Summer Institute June 25-26 in CA.



Mathematics teacher **Dr. Micah Fogel** recently received the Edyth May Sliffe Award for Distinguished High School Mathematics Teaching, sponsored by the Mathematical Association of America

(MAA). He is one of only 24 high school teachers in the U.S. and Canada to receive the award.

Deb Gerdes, professional development leader for Problem-Based Learning, presented workshops on PBL design to teachers on the Crow Reservation and on the Northern Cheyenne Reservation in Montana June 11-13 and to teachers in Lincoln Elementary School August 27 in Lincoln, Illinois.

Dr. Raymond Dagenais, curriculum and assessment leader in science, authored the paper *Have My Students Learned Anything in My Electricity and Magnetism Class?* which he co-presented with Science Teacher Laura Nickerson at the American Association of Physics Teachers National Meeting July 21-25 in Rochester, NY.

Dr. Steven Rogg, coordinator of professional development and research, co-facilitated an IMSA 2061 focus workshop July 16 in Seattle, WA.

Matt Wicks, director of virtual learning and co-chair of the Illinois Virtual High School, presented *Preparing to Teach Online Courses* at the Michigan Statewide Virtual High School Symposium May 23 in East Lansing, MI.

Science teacher **Laura Nickerson** presided over the session *Peer-Led Team Learning* during the American Association of Physics Teachers National Meeting July 14-19 in Rochester, NY.

Mathematics teacher **Michael Keyton** presented *Using Cabri Geometry to Assist Students with Proof* at the CabriWorld II International Conference June 14-17 in Montreal.

Student Accomplishments

Recent examples include:

Lisa Kelly of Libertyville, **Eric Szczeniak** of Buffalo Grove, **Christine Tsai** of Naperville and **Margaret Wat** of Naperville presented their research work at Sakharov's Readings, a highly selective research conference in St. Petersburg, Russia. They were invited by the Russian Academy of Sciences to participate.

IMSA student **Jared Kaplan** of Lemont was selected as one of 24 students nationwide to become a member of the 2001 United States Physics Olympiad team.

IMSA's Computer Science team members, **John Carrino** of Marseilles, **Navreet Gill** of Elmhurst, **Dan Gulotta** of Naperville, **Jeff Tamer** of Schaumburg and **Yisong Yue** of Gurnee won second place in the International All-Star contest. In addition, Carrino achieved a perfect score for the regular season.

Seven members of the Girls Track and Field team qualified for the IHSA State Championship.

Sarah Walter of West Chicago was a co-leader of a National Coalition Building Institute diversity workshop held in Matteson in June.

IMSA Kids Institute: (continued from page 4)

Kids Institute programs served 300 students this summer and more than 600 in external activities during the school year. Our new middle school programs attracted nearly 100 middle school students and included: *Explorations in Science*, *Digital Art and German Explorers*. In addition, the IMSA student-produced, *Real Science 2001 CD-ROM* is being shipped to nearly 700 schools in Illinois this fall, compliments of the Kids Institute.

A Science Explorers student studies pond organisms.

Growth continues with our compass pointed in many directions. A new home in a section of the student union will provide "think tank" space for current and future Kids Institute offerings including *Science Explorers*, *Real-Science*, *Forensics Online* and *IMSA on Wheels*. You are invited to stop in to visit our student entrepreneurial development space – bring your ideas with you!

To be placed on the Kids Institute mailing list, email Britta at britta@imsa.edu or call 630 907-5073.

IMSA Study Wins Statewide Research Award

A multi-year research study partnership between IMSA and Shepard High School in Palos Heights, Illinois, recently was selected for the 2001 Winn Research Award, sponsored by the Illinois Association for Supervision and Curriculum Development (IASCD).

The research study, *A Four-Year Contrast Between High School Students in Interdisciplinary and Discipline-Based Curriculum Programs: Behavioral and Academic Implications*, was selected for the award "because of its potential impact upon teaching and learning in Illinois classrooms."

The 2001 Winn Research Award will be presented to Dr. Steve Cordogan, IMSA coordinator of research and evaluation, and Dr. Lois Stanciak, executive director of assessment, student services and fine arts for District 218, during the Annual Illinois ASCD Conference to be held October 4 and 5.

"I am very honored to be the co-recipient of this award, particularly because it showcases a highly successful program of school innovation," Dr. Cordogan said. "The study clearly demonstrated that student learning and attitudes can be significantly improved on a large scale through a concerted effort by creatively motivated administrators and faculty."

As reported in the Summer 2000 issue of *NOVA*, the research partnership began in 1993 when Shepard teachers and administrators wanted to better meet the needs of "at-risk" students. As a result, Shepard High School developed the Interdisciplinary Teaching and Learning (ITL) Program which integrated English, mathematics, science and social science courses for "at-risk" students. The program later expanded to also include mainstream students, including an honors group. A subsequent research partnership

with IMSA led to a four-year study tracking the first graduating class of students that were educated under the program and contrasting them with students in the school's discipline-based program.

The award-winning research study found that the ITL Program had a very positive effect on student learning and behavior and that interdisciplinary teachers expressed a strong preference for their teaching experience over prior non-integrative ones.



Dr. Cordogan



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 Office of
Advancement (630) 907-5033.*

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