IMSA Great Minds Program Hits the Ground Running
Students and Staff Rub Shoulders with Renowned Scholars

To "bring the best minds in the world to IMSA," the Illinois Mathematics and Science Academy launched its Great Minds Program in the Fall of 1998. Leading the program is Nobel Laureate Dr. Leon Lederman, a "founding father of IMSA."

This story is the first in a series to appear in upcoming NOVAs, charting the development of the program and its impact on IMSA students and staff, and other students and teachers in Illinois.

The IMSA Great Minds Program, although only a few months old, already has brought additional Nobel Laureates to meet with students and staff to discuss topics such as particle physics, holography, and social and political problems confronting humanity.

Early visiting scholars included Dr. Jan Visser of the UNESCO Learning Without Frontiers Program, Nobel Laureate and physicist Dr. Jack Steinberger, and Dr. Tung H. Jeong, professor and director of the Center for Photonics Studies at Lake Forest College. In addition, Resident Scholar Dr. Lederman presented four seminars to IMSA students on topics such as How Science Works and the History of Physics.

These seminars for IMSA students, staff and invited guests are only one component of the Great Minds Program. Soon the program will serve other students and teachers from throughout the state, as well as the general public.

"Beginning in February, IMSA will kick off the Great Minds Dialogue Series for students and educators throughout Illinois to engage in discussion with world-renowned experts in such areas as cancer research, genetics and science education," said Dr. Judith Scheppler, IMSA coordinator of student inquiry.

Great Minds to Visit in 1999
In its inaugural year, there are three primary components to the IMSA Great Minds Program:

- Great Minds Dialogues for Illinois educators and students
- Great Minds Seminars for IMSA students, staff and invited guests
- Great Minds Community Lectures for the general public

The events on page 3 are planned for Winter and Spring of 1999; all will be held on the IMSA campus.

(Continued on page 3)
Dear IMSA Shareholders,

As the Inaugural Resident Scholar of the new IMSA Great Minds Program, I'd like to share with you some thoughts on ways in which IMSA and its students can help further global science education and public understanding of science.

Amidst the plethora of events celebrating the new millennium, there is the “World Conference on Science” (WCS). This conference, to be held in Budapest in June 1999, is co-sponsored by UNESCO (United Nations Education, Science and Cultural Organization) and by ICSU (International Council of Scientific Unions), two major global organizations. The event provides a unique forum at which scientists, political decision-makers and others from all over the world, can discuss how science is to serve society in the decades to come. Because I believe that the WCS could be a tremendous learning opportunity for IMSA students, I have proposed that the WCS should listen to students, the future scientists of the 21st Century, and have an interactive dialogue with the 20th Century scientists who come to Budapest. There are many issues these young scientists (Yes, IMSA students!) could raise. They include:

1) 20th Century science was in part driven by military and commercial forces. What are the prospects if we shift priorities to the well being of humanity?
2) What is there left to do? Is there any substance to the “end-of-science” pundits who maintain that it is almost all over?
3) What are the most interesting problems in your field?
4) What will be the most interesting fields in the next century?
5) How can we use the international traditions of science to insure that the applications of science are wise, ethical and moral?
6) How could you have allowed the mismanagement of science which produced environmental degradation, pollution, climate change, natural resource depletion, and bio-diversity calamity on such a global scale?

One could imagine a very lively and thought-provoking panel discussion along these lines. WCS, in response, organized an “International Forum of Young Scientists.” I hope to take several IMSA students to Budapest. This would be a great component of the Great Minds Program!

As a forerunner, the Chicago Historical Society is putting on a similar panel, but more closely focused on the history of science in Chicago. This takes place in January and IMSA students are participating.

Thank you for your support of IMSA and our efforts to help improve public understanding of science.

Sincerely,

Leon M. Lederman
Resident Scholar,
IMSA Great Minds Program
# 1999 Great Minds Program Calendar of Events

## Great Minds Seminars—For IMSA students, staff and invited guests

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
<th>Time</th>
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<tbody>
<tr>
<td>January 11</td>
<td>Dr. Chris Quigg, Senior Physicist, Fermi National Accelerator Laboratory</td>
<td>4:15-6:00 p.m.</td>
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<tr>
<td>January 28</td>
<td>Dr. Dudley Herschbach, Nobel Laureate in Chemistry, Harvard University</td>
<td>3:00-4:30 p.m.</td>
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<tr>
<td>February 1</td>
<td>Dr. Michael Turner and other leading cosmologists from The University of Chicago</td>
<td>4:15-6:00 p.m.</td>
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<td>February 15</td>
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<td>March 15</td>
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<td>May 10</td>
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## Great Minds Dialogues—For Illinois educators and students

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<th>Date</th>
<th>Event Description</th>
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<tr>
<td>February 24</td>
<td>Dr. Leon M. Lederman, Nobel Laureate in Physics and IMSA Resident Scholar and Mr. Ira Flatow, National Public Radio Host of Talk of the Nation: Science Friday</td>
<td>10:30 a.m.-12:00 p.m.</td>
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| March 17   | Dr. Leon M. Lederman, Dr. Marsha Rosner, University of Chicago Cancer Researcher, Professor Lori Andrews, Chicago-Kent College of Law | *10:30 a.m.-4:00 p.m.*
|            | *note: this time also includes an afternoon hands-on workshop*                     |               |
| April 8    | Dr. Leon Lederman, And a panel of science education experts                        | 10:00 a.m.-2:00 p.m.|

## Great Minds Community Lectures—For the general public

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
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<tr>
<td>March 1</td>
<td>Dr. Leon M. Lederman</td>
<td>7:00-8:30 p.m.</td>
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<tr>
<td>April 6</td>
<td>Dr. Michael Turner</td>
<td>7:00-8:30 p.m.</td>
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For more information on a particular event, contact Dr. Scheppler at (630) 907-5053 or email greatminds@imsa.edu.

**IMSA Great Minds**

(continued from page 1)

**Great Minds Science Biography Project**

In addition to the seminars, dialogues and lectures, a multi-year project, *Great Minds Science Biography Project: Milestones in 20th Century Science*, will allow 12 students from IMSA and area high schools to work with Dr. Lederman in a shared research project to document important breakthroughs in 20th Century science.

Their work will culminate in a book for middle school students written by IMSA students and Dr. Lederman, profiling 12-15 key scientists who significantly influenced life on the planet.

In the next few months, IMSA students also will attend and present at annual national science conferences including the American Association for the Advancement of Science in California and the American Educational Research Association in Montreal.
REN Weekend Broadens IMSA Community’s Horizons

By Michael Peil ’90, IMSA Alumni Association President

The inaugural IMSA Alumni Association REN Weekend event was held January 8-9, 1999 at IMSA. What is REN Weekend? REN Weekend is a gathering of alumni, faculty, staff, students, parents, board members and others, organized into group discussions, panel presentations, and other formats, for the thoughtful consideration of pressing issues of the day.

Everyone who attended was assigned to one or more panels, and attended and participated in presentations when not actually serving on panels.

About 30 faculty, staff, alumni and others attended a successful “dry run” in August, with panel topics ranging from the Future of the Internet to International Terrorism to The Last Good Book I Read.

The January REN Weekend brought together a much larger group of the IMSA community, including a number of current IMSA students, parents (past and present) and friends of the Academy. The goal of the weekend was to foster discussion and consideration of a wide variety of topics, and perhaps “shed more light than heat” on important current issues.

The weekend began Friday night at 7:00 p.m. with registration, a dessert reception and a welcome session. REN continued Saturday with a continental breakfast and morning sessions, a luncheon and afternoon sessions and concluded with a community dinner.

The REN event was held in conjunction with IMSA’s Intersession, the first week of the second semester. Some alumni came back to the Academy to teach Intersession courses. Our hope is that the REN weekend grows in numbers and helps to bring the IMSA community even closer together.

Michael Peil, ’90 works for the Chicago law firm of Altheimer & Gray

IMSA Schedules Summer Service Programs

This summer, the Illinois Mathematics and Science Academy once again will fill its classrooms and corridors with students and teachers from throughout Illinois.

Calendar of IMSA Summer Service Programs

| June 14-18 | Session I |
| June 21-25 | Session II |

Science Explorers

4-6th grade students from the Fox Valley will study a different science topic every day. The sessions are taught by IMSA students with assistance from IMSA faculty and alumni, as well as “resident scientists” from the Chicagoland area.

July 19-22

Summer Sleuths

Middle school students from the Fox Valley will be introduced to problem-based learning.

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Stedman Graham Presents Horwitz Lecture on Ethics

The lecture series is held in memory of Auroran Rich Horwitz, IMSA’s first legal counsel, who died in August 1990. Lectures are presented by prominent leaders in education, government and the private sector.

Well-published author and businessman Stedman Graham outlined his steps to success during the seventh annual Richard L. Horwitz Lecture on Ethics held at IMSA October 20.

Graham, chairman and chief executive officer of the management and marketing consulting firm of S. Graham & Associates (SGA), presented You Can Make It Happen to IMSA faculty, staff, alumni and seniors, and friends and family of Rich Horwitz.

Graham is founder and executive director of Athletes Against Drugs (AAD), a non-profit organization of athletes and other civic leaders committed to deterring substance use, advancing education, and developing leadership in youth. Graham also serves on several charitable boards including the National Urban League and the National Board of Directors for Junior Achievement.

His books You Can Make It Happen (1997) and You Can Make It Happen Everyday (1998) detail Graham’s philosophy in a nine-step process for personal and professional growth and leadership development. During his lecture, Graham reviewed the steps including: Check Your ID (know yourself); Create a Vision (your life’s destination); Develop a Travel Plan (prepare for the future); Master the Rules of the Road (your guiding principles); Step Into the Outer Limits (overcome your fears and don’t be afraid to take risks); Pilot the Seasons of Change (be flexible); Build Your Dream Team (create a support team); Win By a Decision (make good choices) and finally, Commit to Your Vision (stay focused).

Senior Ani Vallabhaneni of Crystal Lake asked for Graham’s definition of ethical leadership. Graham replied that ethical leadership was consistency over time in things such as honesty, hard work, and setting a good example and that such consistency determines a person’s character.

Following the lecture, a reception was held where Graham spoke with students and signed books and programs.

Shaleen Aghi, a junior from Glendale Heights, contributed to this story.

The Horwitz Lecture is supported by the IMSA Fund for Advancement of Education, a not-for-profit corporation that enlists investments of corporate, foundation and individual donors in the Academy. These investments support curriculum development projects, statewide outreach programs, minority recruitment programs, laboratory equipment purchases, facility enhancements, special student activities and a permanent endowment.
IMSA Students Participate in Ameritech's Teleconference to Capitol Hill

IMSA students recently talked politics with Congressmen on Capitol Hill as part of Ameritech's 1998 Senate Education Technology Demonstration.

IMSA was selected as one of 10 schools in the Midwest to be linked with Capitol Hill for this special education and technology event, which was orchestrated and broadcast September 9, 1998, from the Toyota Video Production Laboratory on IMSA's campus.

Using distance learning technology provided by Ameritech, Sony and Video Images, students and Congressmen discussed topics including environmental protection, healthcare reform, a minimum wage increase and the economics of professional sports.

Student panelists (pictured below left to right) Ryan Armour of Raymond, Sarah Schmidt of Marissa, Janessa Stream of Rossville and Angel Anderson of Glen Ellyn presented the historic, economic and scientific review of the establishment of national park wilderness areas. Ecology teacher John Thompson said the event was a wonderful opportunity for the students. “It required students to exam what technology can be used to make a presentation that can demonstrate their issues clearly and accurately in a multimedia format,” he said.

The day-long program sponsored by Ameritech celebrates advancements in classroom-based technology and highlights the public-private collaborative efforts underway to integrate technology effectively into teaching and learning. Now in its second year, the event is endorsed by the National Coalition for Technology in Education and Training (NCTET), a nonprofit, nonpartisan organization founded in 1992 and dedicated to promoting positive uses of technology to improve education and training.

Student Participants

<table>
<thead>
<tr>
<th>Name</th>
<th>Hometown</th>
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<tbody>
<tr>
<td>Denise Lorenz</td>
<td>Antioch</td>
</tr>
<tr>
<td>Doug Lewandowski</td>
<td>Batavia</td>
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<tr>
<td>Jonathon Frederick</td>
<td>Charleston</td>
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<td>Tina Pratl</td>
<td>Chicago</td>
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<td>Mike Siew</td>
<td>Chicago</td>
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<tr>
<td>Anna Inton</td>
<td>Des Plaines</td>
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<tr>
<td>Kathy Chen</td>
<td>Edwardsville</td>
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<tr>
<td>Angel Anderson</td>
<td>Glen Ellyn</td>
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<tr>
<td>Jon Helm</td>
<td>Macomb</td>
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<td>Sarah Schmidt</td>
<td>Marissa</td>
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<tr>
<td>Ryan Armour</td>
<td>Raymond</td>
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<tr>
<td>Janessa Stream</td>
<td>Rossville</td>
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<td>Adrian Sauder</td>
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Student-Actor Makes National Television Debut

By Shaleen Aghi, Student Writer

Miguel Marling, on leave from IMSA as a Rotary Youth Exchange student, made his national television debut October 18, 1998, on the NBC mini-series, A Will of Their Own.

Marling portrayed a teenage Mexican immigrant who, along with other field laborers, protested the danger and hardships of work in the Southern California strawberry fields. The scene was filmed last June in Belleville, Illinois, near Marling's hometown of O'Fallon.

Marling was in the company of some of Hollywood's most acclaimed actors and actresses including Faye Dunaway, Ellen Burstyn, Sonia Braga, Lea Thompson and John Shea.

Marling, the son of Randy and Betty Jo Marling of O'Fallon, plans to pursue a double major in literature and jazz piano.

Apart from his studies at IMSA, Marling's stage career includes six seasons of acting and touring with the Muny Theater of St. Louis, Missouri, the largest outdoor theater in America. He has been acting, singing and modeling since the age of nine and also has appeared in television commercials and radio advertisements.

Marling, currently in Ciudad Victoria, Mexico, as a Rotary Exchange student, plans to return to IMSA next year.

Shaleen Aghi, a junior from Glendale Heights, is pursuing her Plan of Inquiry in communications as an assistant in the Office of Institutional Advancement and Public Policy.
Class of 2002 Applications
IMSA is seeking applications for the Class of 2002. Talented Illinois students enrolled in the equivalent of a ninth grade program are eligible to apply. Two Visitor Information Program Days (VIP Days) will be held at IMSA on January 30 and February 21 for prospective students and parents to tour the campus, learn more about academic and residential programs, and meet with current students and parents. Prospective students may contact their home school guidance counselor or IMSA at 1-800-500-IMSA to receive an application. Applications must be postmarked by March 1, 1999.

Tellabs Studio to Open Soon
Construction of the Tellabs Studio for Professional Development is progressing nicely, with opening anticipated in February 1999. This will be a prototype "smart classroom" equipped with the infrastructure, hardware and furniture needed to give IMSA the flexibility and capacity to deliver top quality professional development learning experiences to Illinois educators. The Studio was funded by a grant of $100,000 from the Tellabs Foundation.

IMSA Featured in New French Book
IMSA is featured in the French book, Enfants, Chercheurs et Citoyens: La Main à La Pâte, (Children, Researchers and Citizens: Hands On) written by French Nobel Laureate Dr. Georges Charpak. At the request of Dr. Charpak, a consortium of French educators spent a week at IMSA last spring, studying science programs, visiting classes and interacting extensively with IMSA faculty. As a result of this intensive immersion experience, Dr. Charpak and his colleagues published the book featuring IMSA and the Teachers Academy of Mathematics and Science in Chicago. The book is endorsed by the French Ministry of Education and is being used as a catalyst to stimulate the transformation of French science programs.

Chicago Tonight on the Road
Dr. Stephanie Marshall, president, was a panelist on the television show, Chicago Tonight on the Road, on November 12. Host John Calloway engaged Dr. Marshall, three other panelists and members of the audience, including staff, students and parents from IMSA and other Chicagoland schools, in a lively discussion about academic competition. Speakers from IMSA emphasized the importance of collaborative inquiry, problem-finding, problem-solving and service for the world over competition, test scores, grade point averages, class ranks and individual gain.

Board Honors Rep. Deuchler
On December 8, the IMSA Board of Trustees passed a resolution honoring retiring State Representative Suzanne Deuchler, in whose district IMSA is located, for "[giving] generously of her time, energy and talents to advance the legislative charge and mission of the Academy on behalf of the People of Illinois" and for her "dedication and contributions...her voice, counsel and leadership in the 42nd District and in Springfield."

Meeting the Y2K Challenge
A task force led by Matthew Wicks, chief information officer, has worked diligently for some time to address Y2K issues. A recent status report revealed that the vast majority of systems at IMSA are already Y2K compliant. The few systems that are not compliant are either scheduled for replacement, are under contract to be made Y2K compliant, or their lack of compliance will not impact operations.

Professional Contributions
Recent examples include:
- IMSA President Dr. Stephanie Pace Marshall recently was elected to the Board of Directors of the Terra Foundation of the Arts in Chicago. The Foundation was established by Ambassador Daniel Terra to advance and promote American Art. The Terra Museums are located in Chicago and Giverny, France.
- Dr. Ray Dagenais, curriculum and assessment leader in science, presented TIMSS Impact on Science Education at the Illinois Science Teachers Association Annual Meeting in Rosemont, IL.
- John Sippy, social science teacher, serves on the Social Studies Committee of the Illinois State Learning Standards. Another social science teacher, Bernard Hollister, presented problem-based learning situations as they can be used in history at the Illinois Council for Social Studies Conference and at the National Council for the Social Studies National Convention. He did this using the CD-Rom 1919 which he helped develop with The Chicago Metro History Center.
- Linda Schielke, Chief Operating Officer, The Center @ IMSA, Dr. Steve Cordogan, coordinator of research and evaluation, and Dr. Michael Palmisano, vice-president for public policy and service, presented sessions at the Annual Fall Conference of the Illinois Association for Supervision and Curriculum Development in Springfield, IL.

(Continued on back cover)
News Briefs (continued from page 7)

► Registrar Sandi Miller serves as the national committee chair for the High School Issues Committee of the American Association of College Registrars and Admissions Officers. Dr. David Barr, director of learning-at-a-distance programs, serves on the National Educational Technology Standards Project leadership team. Chief of Security Jim Bondi chairs the Community Task Force and Illinois Campus Security Act of the Illinois Attorney General's Task Force on Campus Date Rape and Drugs.

► John Stark, German teacher, gave three presentations at the American Council on the Teaching of Foreign Language '98 Annual Meeting and Exposition. Research Associate Jay Thomas presented a research report, Longitudinal Study of Gifted Secondary Students, at the Illinois Association for Institutional Research 28th Annual Conference in Findlay, IL.

Student Achievements

Recent examples include:

► Senior Adrianna Zhang was one of the authors of an abstract, The detection of simian virus in human tumours by polymerase chain reaction, published in 1998 in the Italian journal, Monaldi Arch Chest Disease.

► 44 IMSA seniors qualified as semifinalists in the 1999 National Merit Scholarship Corporation competition. Seven qualified as semifinalists in the 1999 National Achievement Scholarship Program for Outstanding Negro Students. Three qualified as finalists in the 1999 National Hispanic Recognition Program.

► IMSA student musicians once again were invited to perform at the Drake Hotel in Chicago as part of the Hotel's holiday season celebration. They entertained an appreciative crowd in the Hotel's Palm Court on December 12.

IMSA students Julia Thompson, Anjali Vijayakumar and David Ignacio surround former Vice President Dan Quayle following his speech "Standing Firm," held at Loyola University. The event, sponsored by the Young America's Foundation, was attended by IMSA students and other special guests.

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