IMSA360

APRIL2008

News for Alumni and Friends of the
Illinois Mathematics and Science Academy®

Life in the *Fast* Lane

IMSA President
Dr. Glenn "Max" McGee
The First Year

Message From the President

As a long-time educator in Illinois, I have admired IMSA's role as an international leader in developing talent and leadership in science, technology, engineering and mathematics (STEM). I am honored and privileged to now serve as IMSA's second president.

This first year, I have been meeting with educational leaders and policy makers across Illinois as well as IMSA students, parents, faculty, staff, alumni and donors to solicit ideas and determine our critical needs. From these conversations, I am convinced that IMSA's service to students, teachers and schools is more relevant and important than ever. The challenges we face in the 21st century will need to be addressed by the talents and contributions of scientists, engineers and entrepreneurs. Working as real partners in dynamic networks, we can and must ensure that Illinois students have accomplished teachers, supportive mentors and resources to support effective STEM education.

I am proud to introduce the inaugural issue of *IMSA360* which demonstrates, in vivid ways, how our students and alumni attain extraordinary success. We also show how our statewide programs enhance teacher skills and inspire children, especially the underserved, to excel in mathematics and science.

The name *IMSA360* represents our full circle of constituents and full service to Illinois and beyond. We hope this publication shows the power of IMSA's collective community to make a lasting and tangible impact on education in Illinois. We also hope to generate further interest in working with your communities to grow and strengthen networks and partnerships that will make an enduring difference in the future of our schools, communities and state within a global society.

The mission of IMSA, the world's leading teaching and learning laboratory for imagination and inquiry, is to ignite and nurture creative, ethical scientific minds that advance the human condition, through a system distinguished by profound questions, collaborative relationships, personalized experiential learning, global networking, generative use of technology and pioneering outreach.

IMSA360

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IMSA Tops in *The Wall Street Journal*

In November 2007, *The Wall Street Journal* named IMSA among the top 40 public and private college preparatory programs in the world for placing graduates in U.S. Ivy League and highly selective colleges and universities.

Dr. McGee Appointed to IBHE Diversity Board

IMSA President Dr. Glenn "Max" McGee was appointed by the Illinois Board of Higher Education (IBHE) to its Diversifying Higher Education Faculty in Illinois (DFI) Program Board. The purpose of the DFI Program is to encourage "minority students to enroll and complete academic programs at the post-baccalaureate level (master degree/doctorate degree) and to enhance the diversity of faculty and staff of Illinois institutions of higher education." The DFI Program Board is responsible for administering the program and developing policies and strategies to achieve these changes.

Students Excel in Global/National Competitions

One IMSA team received the highest ranking possible in the international High School Mathematical Contest in Modeling (HiMCM), placing IMSA among the top four schools in the world. Team members were William Hahne, David Nai, Adam Novak, and Parker Schmitt. The IMSA team of Bonny Jain and Siddharth Narayanan was awarded Regional Outstanding.

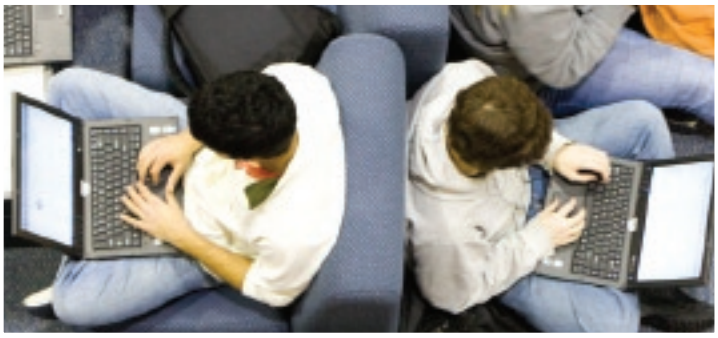
IMSA students Steven Cai, Zexi Fang, Jagannath Nayak and Emily Zhao were named semifinalists in the 67th Annual Intel Science Talent Search. Often considered the "junior Nobel Prize," the Intel STS is America's oldest and one of the most prestigious high school science competitions.

IMSA students Steven Cai, Jagannath Nayak, Birce Onal, Sarah Shareef and Evelyn Wang were named semifinalists in the Siemens Competition. Siemens signature programs, the Siemens Westinghouse Competition in Math, Science & Technology and the Siemens Awards for Advanced Placement, reward exceptional achievement in math, science and technology.

IMSATube and *Mandarin Chinese* Among New Learning Opportunities

There are a record number of new IMSA Learning Opportunities for the 2007 – 2008 academic year. Mathematics advanced students can enroll in *Theory of Analysis* and students interested in computer science can gain a global perspective in *Computer Science in Emerging Technology*. The Science team is continuing its seminar series with *Seminar in Biology: Neurobiology.*

English students have two new elective choices, *Gender Studies* and *IMSATube*: *Non-Fiction Video Production.* The History/Social Science team is offering a new integrative course, *A History of Technology and Culture.* Students who want to personalize their fitness plans can enroll in the Wellness team's new elective, *Individualized Physical Fitness*.



In addition, *Level One Mandarin Chinese* is being offered to sophomores for the first time and the World Language team introduced *Explorations in Linguistics*.

Other notable changes to the IMSA curriculum include dividing *Symphonic Band* into *Concert Band* and *Wind Ensemble*; dividing *String Orchestra* into *Chamber Strings* and *String Orchestra*; and applying pass with distinction, pass or fail grades to enrollment in *Student Inquiry and Research*.

-Dr. David Abler, IMSA director of research, assessment and evaluation.

IMSA Faculty and Staff Contribute to Their Fields

Mathematics teacher Ruth Dover has been named one of three Illinois finalists for the Presidential Award for Excellence in Mathematics and Science Teaching (PAEMST). Dover was chosen based on criteria such as: the ability to foster curiosity and to generate excitement about the uses of science and mathematics, and an experimental and innovative attitude in their approach to teaching.

English teacher Dr. Grace Glass successfully completed all of the requirements to receive certification with the National Board for Professional Teaching Standards (NBPTS). Nearly 30% of the IMSA faculty members are NBPTS-certified.

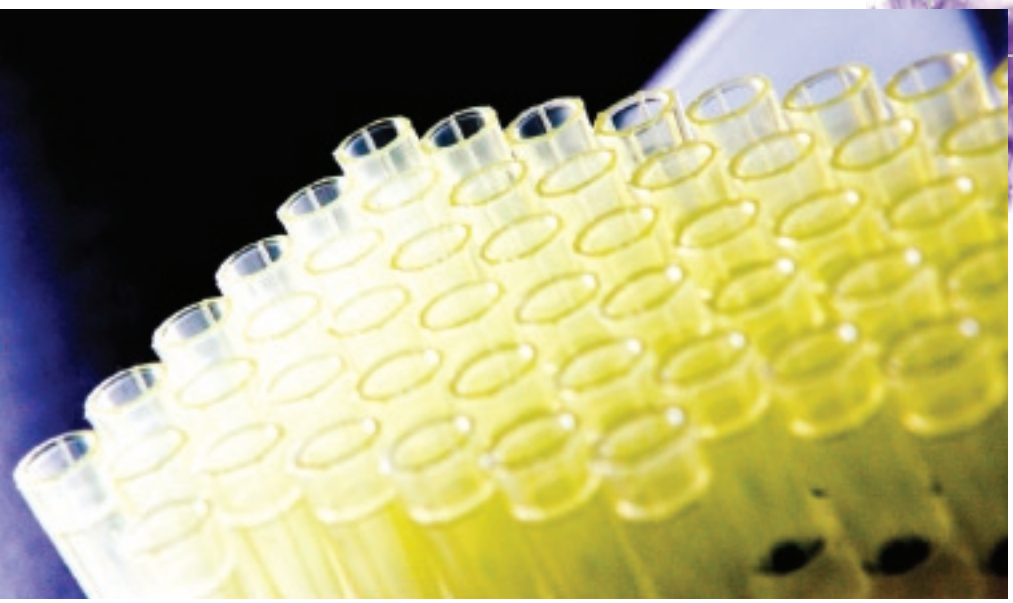
Russian teacher Paavo Husen was recognized by the American Association of Teachers of Slavic and East European Languages (AATSEEL) and has received the Excellence in Teaching Award, (Secondary) 2007. Husen also has been appointed to the American Council of Teachers of Russian (ACTR) Board of Directors.

Dr. Eric McLaren, principal and vice president for Academic Programs, is teaching *School and Community Relations*, a graduate course in education at Aurora University.

The study "Questioning the Utility of Self-Efficacy Measurements of Indians" by Dr. Purva Rushi, policy and planning associate, was published in the *International Journal of Research & Methods in Education*. The study examined the influence of academic self-efficacy and social support on the academic success of Indian-American and Caucasian-American undergraduate students.

Social science teacher Dr. Claiborne Skinner recently published *The Upper Country: French Enterprise in the*

NEWS**HEADLINES**



Colonial Great Lakes. In addition, Dr. Skinner is the Illinois State Winner for the 2008 Outstanding Teacher of American History for the National Society of the Daughters of the American Revolution (NSDAR).

New Partnerships Extend IMSA's Reach in Illinois and Beyond

Motorola Grant Expands IMSA's Problem-Based Learning Initiatives

The IMSA Fund for Advancement of Education received a $100,000 Innovation Generation Grant from the Motorola Foundation to help inspire Illinois' future scientists and engineers. IMSA President Dr. Max McGee gratefully thanked the Motorola Foundation for the generous gift, which will enable IMSA to expand its professional development programs to other sites throughout the state. "Thanks to the Motorola Foundation, IMSA's Problem-Based Learning (PBL) Initiative will provide professional development sessions for elementary, middle and high-school teachers in Chicago and other Illinois sites," Dr. McGee said.

U.S. Department of Education Grant Enables Golden Apple and IMSA to Increase STEM Talent Pool

The Golden Apple Foundation and IMSA are joining forces to address the "quiet crisis" represented by America's declining scientific and engineering talent pool. A $341,000 federal grant will enable Golden Apple and IMSA to prepare more talented math and science teachers for Illinois schools, especially schools of need. The partnership will create residential Summer Institutes at IMSA in 2008 for 25 participant "Scholars" majoring in math or science in a middle or secondary education program. Golden Apple Award-winning teachers and IMSA educators will plan and present coursework to strengthen the preparation of these prospective teachers.

Matching Grant to Bring DNA Sequencer to IMSA

The IMSA Fund for Advancement of Education was selected to receive a $52,152.00 grant from LI-COR's Genomics Education Matching Funds program toward a Sequencing, Microsatellite, and AFLP® Package. Specifically, this will bring a DNA Sequencer to the Grainger Center for Imagination and Inquiry, allowing IMSA students and others throughout Illinois to conduct genetic research.

IMSA to Become Part of Global Initiative

Dr. Stephanie Pace Marshall, IMSA founding president and president emerita, was invited by President Bill Clinton to join the Clinton Global Initiative. As part of her work, she has created a partnership with Free the Children Foundation and the Fry Foundation to build two educational sites in Kenya and Ecuador. Over time, IMSA students will be able to visit these sites and partner with Free the Children in leadership development.

ALUMNI-IN-**ACTION**

Robots to the Rescue

The December 4, 2007 edition of *Fortune* magazine featured the article "Killer Robots Could Replace Soldiers" which highlighted the work of Nathan Gettings '95 and his brother Adam, who is co-founder of Robotex, Inc. The story about the brothers and their joint entrepreneurial venture is described by the magazine as "a classic Silicon Valley tale of a few engineers who do what they're best at, team up with some kindred spirits, and together build a product to take on the establishment."

"Greatness" Unveiled

Artist Lisa Gloria '89 unveiled her oil portrait of IMSA Founding President and President Emerita Dr. Stephanie Pace Marshall during an IMSA Board of Trustees meeting January 18, 2008. Gloria is giving this gift to Dr. Marshall in recognition and appreciation for her leadership and service to IMSA. Marshall will permanently loan the painting to IMSA where it will be displayed and become a part of IMSA's art collection, which she named "Potential for Greatness" because she believed that IMSA students all possessed a potential for greatness and it was IMSA's role to ignite and nurture it. Learn more about Lisa Gloria at **www.lisagloria.com.**

Life is a Speedway

Jason Harwood '03 is working for The 2007 Nextel Cup Racing Champions: Hendricks Motorsports, in Concord, NC (the race team that Dale Earnhardt, Jr., Jeff Gordon, and Jimmie Johnson drive for). Jason graduated in 2007 from the University of North Carolina with a Bachelor's degree in mechanical engineering with a concentration in motorsports. He was hired at HMS because of his contributions to the UNCC Legends race team.

Common Cause Creates Bond

Capt. Kenyatta H. Ruffin '99 is an F-16 fighter pilot assigned to the 13th Fighter Squadron at Misawa AB, Japan. During the summer of 2007, he deployed to the Balad AB, Iraq in support of Operation Iraqi Freedom. During his deployment, he flew 49 missions, logged nearly 200 combat hours and volunteered in the chapel and hospital during his down time. He says that the best part of his time in Iraq was working with the "amazing group of Americans who have sacrificed so much to ensure that others can enjoy the same freedoms we so often take for granted."

A Beautiful Mind

Travis Schedler '98 is the sole recipient of the 2008 American Institute of Mathematics (AIM) Five-Year Fellowship. The award is "intended for an absolutely first-rate new Ph.D. – someone with the potential to leave a lasting mark on mathematics." The Fellowship supports one outstanding new Ph.D. pursuing research in an area of pure mathematics and covers 60 months of full-time research as well as funds for travel and equipment. Travis will receive his Ph.D. from the University of Chicago and his area of specialization is noncommutative algebraic geometry. He has already written or co-authored 11 papers, including one that has appeared in the *Journal of the American Mathematical Society* and another in the *Duke Mathematical Journal.*

Photos by Dean Kaus Photography, Kenyatta Ruffin and Travis Schedler

ALUMNI-IN-**ACTION**

Physics Trailblazer

Dan Sinars '92 received the 2007 Early Achievement Award from the IEEE Nuclear and Plasma Sciences Society. The award is for scientists and engineers in the field of plasma physics in the first 10 years of their careers. The citation was "for contributions to radiographic measurement of high energy density physics experiments on the 20 MA Z pulsed power generator, including wire-array z-pinches, inertial confinement fusion capsules, and complex hydrodynamics targets." Dan has been a part of Sandia National Laboratories' inertial confinement fusion program since obtaining his Ph.D. in applied physics from Cornell University in 2001. He credits retired faculty member Dr. David Workman's physics classes at IMSA for inspiring him to pursue physics as a career.

GoJulia!

Julia Stamberger '92 was featured in the July 10, 2007 edition of *Crain's Chicago Business* for her Chicago-based company, GoPicnic Inc. (www.gopicnic.com). Her company, which supplies boxed meals that don't require refrigeration to United Airlines on select flights, received a $10,000 grant from the Illinois Department of Commerce and Economic Opportunity's Innovate Illinois program.

Six U.S. Cities Host IAA Regional Club Events

To build upon last year's regional club events honoring Dr. Stephanie Pace Marshall's service to the Academy, the IMSA Alumni Association (IAA) has recently started a new round to welcome incoming President Dr. Glenn "Max" McGee. In all, the first half of 2008 includes six events.

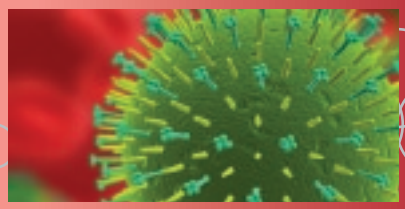
The Urbana-Champaign event, held on November 3, 2007 at the University of Illinois alumni union, drew 31 alumni from 11 graduating classes. IMSA staff attending the event included Dr. McGee and IMSA Director of Development Jennifer Spuehler. On January 12, 2007, 50 alums from 12 graduating classes (with a strong

showing from the class of 1993!) met at Jake Melnick's in Chicago. This event also was attended by IMSA staff and friends including Jim Gerry, Carolyn Johnson, Dr. Marshall, Dr. McGee, Dr. Eric McLaren, Kim McLaren, Suzyn Price, and Jennifer Spuehler. Dr. McGee used these events as an opportunity to introduce himself and to get feedback from alumni about their role in IMSA's future. Events also were held in San Francisco and Seattle. Upcoming events will be held in Washington, D.C. (April 12) and New York (May 3).

Photos by Sandia National Laboratories, Emily Dewan

The IAA is in the process of restructuring the regional clubs, and upcoming changes may include greater flexibility for individuals to request funds from the IAA to defray the costs of activities geared toward small groups of alumni. If you are interested in serving the IMSA alumni community, please consider serving as a chair (or co-chair) for one of the following regional and interest clubs: Urbana-Champaign, Chicago, New York City, San Francisco, Research Triangle Park (Raleigh-Durham, N.C.), Pittsburgh, St. Louis, Washington D.C., the GLBT club, and Seattle. Responsibilities include planning one large event per year, maintaining listservs, providing periodic reports, and working with the IAA to channel requests for funding. You can also suggest a new regional or interest club! Please contact Matthew Knisley at **vice-president@imsaalumni.org** to volunteer or to request more information.

-Matthew Knisley '01



Alumni Share Time and Talents During Intersession 2008

Apparently recent graduates from the Class of 2007 are not ready to let go of Intersession, considering that six of them returned to campus to teach four different sessions at Intersession 2008.

Of course, there also were alumni from 11 other graduating classes who returned to IMSA in early January to share their post-IMSA knowledge and experience with current students, teaching sessions ranging from karate to robotics to public education to psychology to the One Laptop Per Child (OLPC) initiative.

Clair Null '97 led the session, *Science Without Experiments*, where students spent the week discussing how economists try to emulate the scientific method and the tricks that typically are used to get around the fact that people going about their business in the real world just aren't as easy to study as plants and lab rats.

Derek Tung '98 taught a session on healthcare and took his 14 students to visit the hospital where he works. He said that one great thing that he gained from participating in Intersession was the opportunity to not only "give back to the residential high school institution that helped set [him] on [his] path to success, but also to help shape the lives and outlooks of 14 students who have the potential to be the future leaders of healthcare."

Thanks to Neal Groothuis '97, more than 30 students had the opportunity to travel to Chicago to participate in a swing dancing trip, culminating a week of learning the basics of swing dancing. Regarding his experience, Groothuis said, "It was a blast!"

In all, 34 alumni led sessions. For a complete listing of 2008 Intersession offerings, visit **http://www.imsa.edu/learning/intersession/.** You will wish you were an IMSA student again!

-Ande Croll '97

Life in the Fast Lane

IMSA President Dr. Glenn "Max" McGee: The First Year

There is nothing tentative about IMSA President Dr. Glenn "Max" McGee as he sped directly to the fast lane during his first year as IMSA's chief leader.

During that short period of time, McGee has embraced IMSA's third decade and his new role with passion, energy and razor-sharp focus on outcomes. In a matter of weeks, McGee has made front page headlines in several prominent statewide newspapers, been appointed to the IBHE Diversifying Higher Education Faculty in Illinois Program Board, led the implementation of IMSA's new strategic plan, met with statewide education leaders to explore partnerships and even had time for a late-night dodge ball tournament with students in IMSA's residence halls.

McGee is truly "walking the talk" in his attempts to bring to life IMSA's mission, strategic plan and his own goals for his first year, which are featured on IMSA's homepage (www.imsa.edu) under his "President's Corner."

Close Encounters With IMSA Students

McGee is quick to describe IMSA's students as "big thinkers and eager learners." This was evidenced on the first day of IMSA classes this fall, when McGee realized that its educational environment was different from any other he had led. "On the first day of classes, two young women came to my office in full lab regalia, armed with Petri dishes," McGee said. "They wanted a bacterial swab of my office and a few cheek cells for an experiment," he added. "Later that day, two young men stopped in to have a conversation which, in part, concerned the nature of the human soul."

McGee says his daily encounters with IMSA students continue to amaze him and that knowing "how we are helping them achieve their aspirations, stretch their imagination and understand their commitment to using their gifts to advance the human condition" is one of his top measures of success for the Academy.

As someone who loves learning and still considers himself to be a "terrific teacher," McGee seeks out unique learning experiences with IMSA students every chance he gets. Students have talked politics with McGee during a recent "Dinner with the Doc" session, sought homework help, explored issues of social justice–including equity in education funding–during intersession and taught him some hot new line dances during his residence hall overnight stays. McGee has also been a guest instructor for some classes and is quick to point out that during his encounters with students, he gains as much as he gives.

"I taught a sophomore Methods in Scientific Inquiry class for two days and had a blast," McGee said. "What struck me was that once the students started on their data analysis, their focus was incredible. Also, they excelled at working in teams."

McGee Champions "IMSA for All"

In his short tenure, McGee has wasted no time promoting IMSA's mission and vision during visits throughout Illinois with newspaper reporters and editors, school superintendents, business groups and others.

"On the first day of classes, two young women came to my office in full lab regalia, armed with Petri dishes. They wanted a bacterial swab of my office and a few cheek cells for an experiment."

He is eager to find new ways to offer IMSA's programs and services statewide, and considers the opportunity to "make an enduring difference in teaching and learning across Illinois and to make people's lives better" both as one of IMSA's greatest strengths and its major responsibilities.

In his President's Goals for 2007-08 (located at www.imsa.edu), Goal four focuses on increasing IMSA's capacity to:

1. Stimulate excellence in mathematics and science teaching and learning statewide, especially in communities with limited resources and/or capacity; and

2. Assist State policymakers and business leaders in developing "next generation" talent and leadership in science, technology, engineering and mathematics (STEM).

A number of McGee's articulated "deliverables" for this goal have already been met including a new partnership with Golden Apple to implement a Summer Institute in mathematics and science for aspiring teachers in the summer of 2008. In addition, McGee also has made several "IMSA for All" presentations statewide at

conferences in five regional superintendent areas. His appointment to the IBHE Diversifying Higher Education Faculty in Illinois Program Board will enable him to take an active role in helping IBHE to achieve its goals (another "deliverable").

IMSA 3.0

In his first Convocation address to students and staff earlier this fall, McGee spoke of IMSA's "truly unlimited potential" for advancing the human condition and the inspiration and aspiration of IMSA 3.0: to be the world's leading teaching and learning laboratory for imagination and inquiry. McGee has a number of priorities for the Strategic Plan in its first and second years, which he believes will position IMSA for its next decade.

"We need to have 'high energy' campus wide participation in moving our action plans from paper to practice," McGee said. "We need to really live our belief statements and have our actions and interactions reflect them," he added. "Finally, we need to 'walk the talk' of igniting and nurturing creative, scientific ethical minds that advance the human condition, and then sharing our scholarship and proven programs and practices internally and externally."

Ultimately, McGee's dream is that as "IMSA 3.0" we greatly expand our reach and impact to deliver extensive support to schools and districts throughout the state.

"We will create a real and virtual STEM Innovation Hub to attract and develop innovation talent and to stimulate, support and scale innovation in STEM teaching and learning," McGee said. "I also think that IMSA will be a leader in developing a state, national and international STEM network and collaborate regularly with educators, researchers and scientists throughout Illinois and beyond."

It is easy to see how McGee lives life in the fast lane at IMSA every day. His energy, passion and vision for IMSA is infectious. In his own words, "Sitting still is not easy for me, and I think if we are sitting still we are falling behind and not giving our students what they need and deserve. I have a driving desire to get tangible good things done every day for our students, our staff and our state … so let's get to it!"

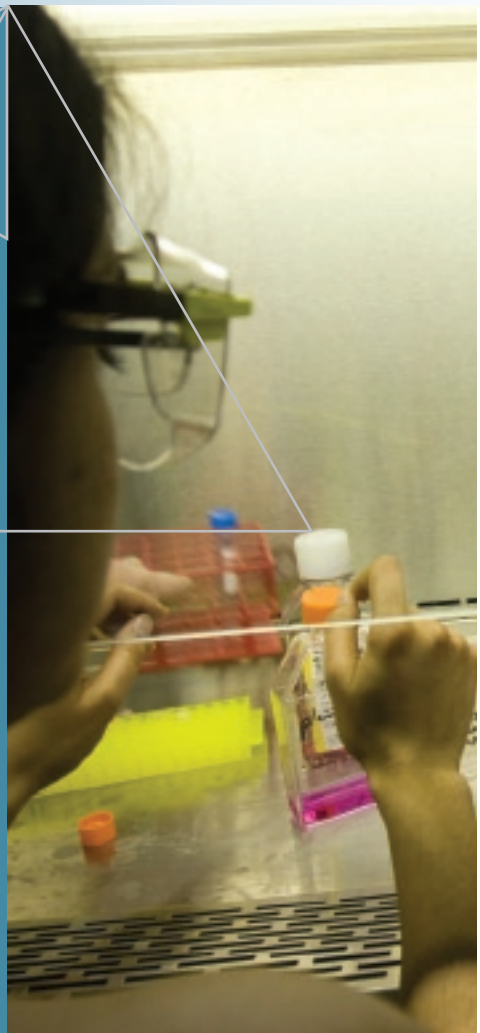
Fast Facts About Max McGee

- Since coming to IMSA, my reading habits have changed. I'm now reading cool science texts like *Einstein*, *A Briefer History of Time*, *A Passion for Mathematics* and *Death by Black Hole*. Whatever happened to Carl Hiaasen and Tom Robbins? Oh well, at least I can carry on a conversation about mathematics, theoretical physics and astronomy. Now it's on to biology and chemistry. Any suggestions?
- A core belief I have is that there is no ceiling on individual human potential.
- One of my biggest regrets is that I did not learn French before following and riding sections of the 2004 Tour de France for nine days.
- My three guilty pleasures are watching 24, annually taking my kids to the Indy 500 where we "experience" the infield and playing Wii Golf.
- My t-shirt collection has expanded exponentially. I own every IMSA class shirt, team shirt and other assorted IMSA gear. This summer, my IMSA swim team t-shirt helped power me to a 2nd place finish at the Lake Geneva Triathlon.
- My wife is a saint, my children are a gift, and my four-year old grandson is fulfilling a second happy childhood for me. I'm 57, but he thinks I'm four.

Does this story leave you longing for more about Max McGee? Do you have an opinion, idea or suggestion you would like to share with him? Then e-mail the President at **president@imsa.edu!**

IMSA's Student Inquiry and Research Program:

Igniting Minds, Shaping Futures



Now in its 20th year, IMSA's Student Inquiry and Research (SIR) Program pairs students with distinguished scholars and researchers, enabling them to pursue compelling questions of interest, conduct and present research findings, engage in entrepreneurial applied science and technology activities, and collaborate with other students, mentors, scholars, researchers and inventors throughout the world.

"Through IMSA's Student Inquiry and Research Program, students are already making significant contributions to their respective fields which may someday lead them to discoveries that will impact humankind," said Dr. Eric McLaren, principal and vice president for academic programs.

Samples of recent student investigations include:

- Testing the Mental Capacity of Rhesus Monkeys
- Sociology of the Internet
- The Response of Oligodendrocytes to Normal Appearing White Matter from Multiple Sclerosis and Control Patients-A Study of the Early Pathology of Multiple Sclerosis
- BA-D1: A Novel Treatment for Type 2 Diabetes

Student research contributions such as these are regularly recognized through publication in professional journals, presentation at research conferences, creation of novel programs, and discovery of innovative techniques.

The American Chemical Society, the American Society of Cell Biology, the American Association for the Advancement of Science, and the National Association of Biology Teachers are just some of the professional associations where IMSA students have presented research. In addition, many have won awards in prestigious national competitions including the Intel Science Talent Search, Siemens Competition, and National Academic, Cultural, Technological and Scientific Olympics; Society for American Baseball Research, and the Junior Sciences and Humanities Symposium

SIR Becomes One-Year Credit Course

While the IMSA Student Inquiry and Research Program has undergone several noticeable changes in the last few years, perhaps the most recognizable change is the way students are now granted credit.

In the past, students involved in the SIR program received a notation of participation on their IMSA transcript. Now, however, students will receive a grade of pass with distinction, pass or fail.

Coordinator of Student Inquiry and Research Dr. Judy Scheppler said it is a welcome change from previous practice. "Granting credit to SIR both honors the hard work that students conduct and enhances the credibility of the program because students are held to higher standards, with additional scrutiny," Dr. Scheppler said.

SIR Staff Expands to Meet Demand

To meet increased student demand (participation rates are now 67-75%), the SIR program added two new staff members in the 2007-08 academic year.

"First-year faculty member Dr. Mark Carlson and second-year faculty member Dr. David DeVol were each assigned to SIR for half of their teaching assignments," Dr. Scheppler said. "Dr. Carlson's background is in physics/biophysics and Dr. DeVol's background is chemistry/biochemistry; both have extensive and valuable experiences in student research programs," she added. "Their expertise provides diversity and increased student and advisor interactions."

In addition to students interested in mathematics and science, Dr. Scheppler is quick to point out that the SIR Program represents a broad range of study.

"The SIR program supports student research not only in science, technology, engineering, and mathematics (STEM) fields (about 75% of participants), but also in other fields including fine arts and the social, behavioral, and economic science fields," she said.

World-Class Laboratory Ignites Learning

The Grainger Center for Imagination and Inquiry (GCII) gives IMSA's inquisitive young researchers access to equipment most would not have access to until they were working in research laboratories.

Thanks to a recent grant to the IMSA Fund for Advancement of Education, students also will be able to conduct specialized genetic research with a new DNA sequencer.

Looking ahead, Dr. Scheppler said that the "sky is the limit" for IMSA's SIR students. She says that SIR will play an even more important role as IMSA looks to meet the individualized needs and dreams of each student.

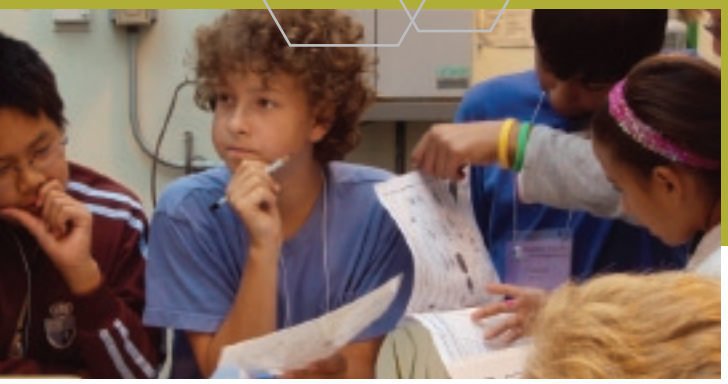
"As IMSA embraces personalized learning and the new strategic plan, the work and role that SIR plays in student learning will only become stronger and more significant," Scheppler said. "Our students are assisting in solving problems that are plaguing us now – new drugs, advances in diagnostics, One-Laptop-Per-Child initiatives, and nanotechnology. They are also exploring historical battlefields, examining literary works, and creating original novels, plays, short stories, and art work," she added.

"The creative and intellectual capacity of our students will be honored and utilized more, and in more significant ways, in the future."

To learn more about the Student Inquiry and Research Program and to view some of the amazing research work currently being conducted by our students, visit **www.imsa.edu/learning/inquiry.**

IMSA Pathway for Illinois Students:

A Fast Track to Challenging Programs in the Hot Fields of Science, Technology, Engineering and Mathematics (STEM)



Why do explosions produce loud noises?

What happens when we run out of phone numbers?

Why do some people get sick from colds and flu and others don't?

Are environmental factors producing mutated frogs?

While these questions are varied, they all have one thing in common – they are part of IMSA's Student Pathway for Illinois students.

Photos courtesy of Illinois Mathematics and Science Academy®

Student Pathway Defined

IMSA Vice President for External Educational Programs Kristin Ciesemier states, "IMSA's Student Pathway is a collaboration with educators, organizations and communities across Illinois to unleash and nurture the potential of a larger and more diverse pool of students who aspire to be engineers, mathematicians, scientists and technologists," she said. "The program takes the form of multiple and increasingly challenging enrichment experiences during out-of-school time for interested and motivated youth in grades four through 12."

Student Pathway Focus and Scope

"Through supplementary education, we want to increase the number and diversity of students who pursue advanced study and careers in STEM," said Ciesemier. "While our programs are based at locations throughout Illinois and online, we also want to create a network for STEM program providers, so we can connect interested students to all available resources," she said. "We don't want to duplicate existing successful programs, so we are creating partnerships to expand opportunities to more students."

Programs Are Research Based and Practice Proven

Experts indicate that afterschool programs create ideal conditions for nurturing young scientists. "Science by Stealth" article authors Lucy Friedman and Jane Quinn state "Seventy-five percent of Nobel Prize winners in the sciences report that their passion for science was first sparked in nonschool environments." [1] Their article also cites afterschool expert Robert Halpern who states "Afterschool programs can respond to children's interests and concerns, giving [them] a measure of control…putting children in active roles as learners … Afterschool programs have the flexibility to provide developmental experiences in a range of domains that schools lack time for, and that low and moderate-income families may lack resources to purchase."[2]

The IMSA programs are designed to provide creative learning experiences that are inquiry based, problem centered and integrate mathematics and science. As a result, IMSA learners retain their sense of wonder and discovery because they put academic concepts to good use by solving real-world problems.

Core Pathway Programs

"Our core programs will help students to develop 21st century skills, stay engaged and continue to explore their interests in mathematics and science at school and independently," said Ciesemier. "While some Illinois students are preparing to apply to IMSA's residential college prep program, others will choose alternative paths to pursue challenging courses," she said. "Ultimately, we hope they will become successful STEM professionals who are able to advance the human condition."

IMSA currently has several core offerings in its student pathway portfolio – IMSA Excellence 2000+, IMSA Kids Institute® and PROMISE.

IMSA Excellence 2000+ (E2K+) is an afterschool enrichment program for Illinois students in late elementary (grades 4-5) and in middle school (grades 6-8) 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 the teachers who deliver the program at local sites.

IMSA Kids Institute® serves students in grades 4-9 through summer and weekend hands-on/minds-on enrichment programs grounded in mathematics and science. The offerings for younger participants are developed and taught by IMSA students, creating a dual learning opportunity for both the participants and their IMSA student teachers. The offerings for older students are taught by IMSA staff with assistance from IMSA students. Programs offered during the school year include IMSA on Wheels, field trips to IMSA, and Saturday enrichment programs. A variety of summer opportunities include Science Explorers, Computer Explorers, Biotech Residential, Math Residential and more.

PROMISE – Middle School enables talented underrepresented and economically disadvantaged students to experience an intense two-week summer residential opportunity that stimulates interest in and develops skills in mathematics, science and English. Through innovative group inquiry and problem-solving activities, the program promotes interpersonal and academic growth.

PROMISE – High School enables talented underrepresented and economically disadvantaged students to become part of an action-packed Saturday enrichment program that integrates mathematics, science and English in discovery-based and collaborative research activities. Students also accelerate their dreams for a bright future by preparing for the Scholastic Assessment Test (SAT), an important component of the application process to IMSA's three-year, residential college prep program and to colleges and universities.

For a Complete List of Programs That Comprise the IMSA Pathway for Illinois Students,
Visit: **www.imsa.edu/studentprograms**

1 Lucy N Friedman, Jane Quinn, "Science by Stealth," *Education Week*, February 22, 2006 Page 45. 2 Ibid.

FINANCIAL SUMMARY

FISCAL YEAR 2007

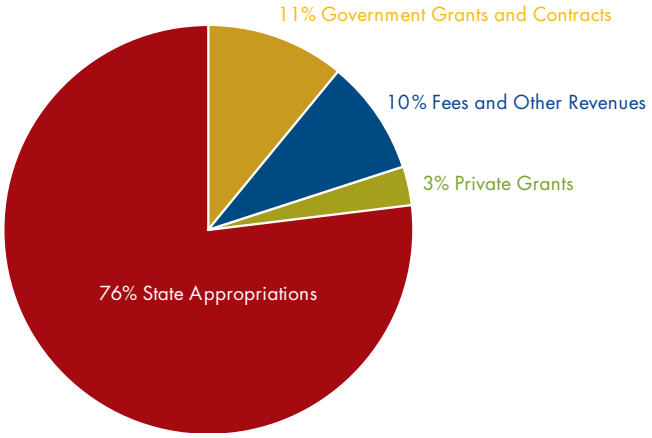
To support and expand the Academy's innovative teaching, research and external service programs/initiatives, the Illinois General Assembly appropriated an operating budget of $17.4 million in 2006-07. IMSA and the IMSA Fund for Advancement of Education work to secure the support and participation of various constituencies including individuals, corporations, foundations, educational institutions and governmental agencies to advance the Academy's mission. In 2006-07, $3.2 million in supplemental funding (gifts and grants) was provided.

IMSA parents paid a fee between $250 and $2,310 in 2006-07 to offset some of the costs of cocurricular programs and residential services.

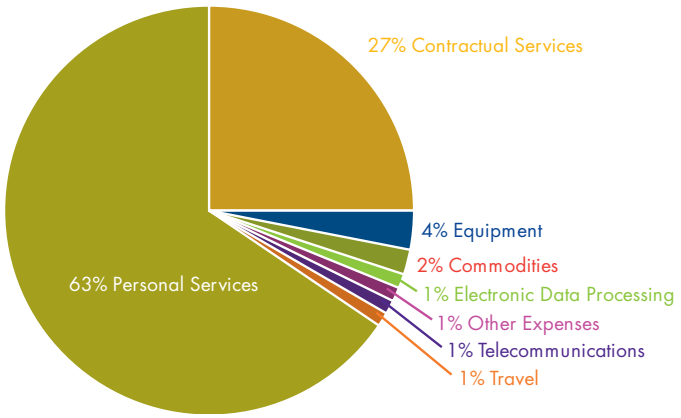
To receive a copy of the 2006-07 IMSA Fund for Advancement of Education Annual Report, contact the Office of Advancement at (630) 907-5040.

IMSA is audited by the Illinois Auditor General. This summary is preliminary. Final financial statements will be available after the completion of the audit at www.state.il.us/Auditor.

Sources of Operating Resources



Expenditures



Vice President's Message

Suzyn Price
IMSA Vice President for Advancement

A comprehensive strategic planning process last year yielded a map for IMSA's future. With seven strategies touching and stretching every part of IMSA , and a new mission statement, the strategic plan is guiding our work and direction. *IMSA360* is a product of the strategic plan and was informed by conversations with alumni, staff, IMSA Board of Trustees and the IMSA Fund Board of Directors. IMSA had several publications that highlighted different constituencies, but not really anything that pulled everyone and everything under one aegis. We hope that *IMSA360* communicates the varied and innovative work of IMSA, all directed toward one goal, "To ignite and nurture creative, ethical scientific minds that advance the human condition."

None of what we do as we move forward at IMSA would be possible without the strong foundation built by IMSA Founding President and President Emerita Dr. Stephanie Pace Marshall. Others worked alongside her, Cathy

Veal as my predecessor in Advancement, and longtime IMSA Fund Board members Michael Birck, James Pearson and William White who recently completed their board member terms. They saw magnificent potential and then proceeded to fulfill it. They are marvels of risk taking, boundless creativity and fierce persistence, characteristics that hopefully will endure at IMSA for years to come.

I hope you enjoy *IMSA360*. Please contact me to let me know what you think (sprice@imsa.edu or 630-907-5040).

Contribute to Community Notes Online!

What's New in Your Life?

Let us and your fellow IMSA classmates/colleagues know about what you've been doing! Have you recently started a new job or been promoted? Are you involved in new and exciting community service projects or other activities? Have you recently been published, honored or elected? If so, please tell us about it at:

www3.imsa.edu/news/community-notes

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SAVE THE DATE
for the Following IMSA Events!

Alumni Weekend (includes reunions for the Classes of 1993, 1998 and 2003)	June 21-22, 2008
Homecoming Weekend	September 27-28, 2008
Alumni Hall Naming	During Homecoming Weekend
Board of Trustees Alumni Awards Ceremony	During Homecoming Weekend

IMSA

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