ASM International Announces Change in Executive Leadership

Thomas S. Passek will succeed Stanley C. Theobald as Managing Director – Theobald to take on new role as Senior Director, Business Development

Stanley Theobald announced his retirement as ASM managing director effective October 15, 2012. Theobald will move to senior director of business development in a transition plan proposed to and approved by the ASM Board at its July 31 meeting. Thomas Passek, currently associate managing director, will succeed Theobald as ASM’s 6th managing director.

Thom Passek served as ASM’s associate managing director for the past ten years and is well positioned to drive and sustain ASM International’s success. Thom has past experience serving as the executive director of ASNT from 2000-2002, and was also executive director of ASM Affiliate Societies for seven years. He also served on the ASAE (American Society for Association Executives) Board and became a Certified Association Executive in 1997. He is a member of ASAE as well as the Council of Engineering and Scientific Society Executives (CESSE).

“In Stan and Thom, we are fortunate to have two outstanding managers in ASM’s rich 99-year history,” said ASM President Christopher Berndt. “As 2013 marks ASM’s 100th anniversary, it is fortunate when you don’t have to look outside the organization for leadership. Thom’s experience working with the ASM Board, membership, affiliate societies, chapters, the ASM Materials Education Foundation, and virtually every facet of operations, assures the 36,000+ members a smooth transition and bright future for ASM.”

In his new role, Stan Theobald will work closely with ASM members, chapters, industry, academia, and government to vastly strengthen ASM’s partnerships, relationships, and product offerings. Berndt noted that, “Stan’s gift to the Society has been strong leadership, recently through challenging times, during his 34-year tenure with ASM, the past ten years as Managing Director. The board and I are delighted that Stan will remain with the Society, and I’m confident his deep passion for the organization will complement the strong management team already in place. He will continue to add value to the organization in his new role working on new growth opportunities and partnerships just as he always has.”

Emerging Professional Achievement Award

Mr. Stephen P. Coryell, Precision Castparts Corp. - Special Metals (PCC), Barboursville, W.Va.  His citation reads:  “Stephen has the enthusiasm, technical horsepower, and personality to become an outstanding talent in our industry. He has already demonstrated this by assuming leadership roles in several programs in his short time at PCC.”

The Emerging Professional Achievement Award, established in 2010, recognizes and honors extraordinary ASM volunteers who are less senior individuals, i.e., 0-5 years of experience post-graduation, who have made a significant impact on ASM International through devoted service and dedication to the future of the Society.

For more information on the Emerging Professionals Committee, please visit www.asminternational.org/emergingprofessionals.

...in this issue

53  Change in ASM’s Executive Leadership
54  2012 Class of Fellows
55  2013 Fellows Nomination
56  Emerging Professionals
57  Chapter News
58  Members in the News
59  HTS/Bodycote Best Paper Contest
60  Profile of a Volunteer
ASM’s 2012 Class of Fellows

In 1969, ASM established the Fellow of the Society honor to provide recognition to members for their distinguished contributions to materials science and engineering and to develop a broadly based forum of technical and professional leaders to serve as advisors to the society. Following are the members recognized by their colleagues for 2012. Additional Fellows may be elected to this distinguished body in subsequent years. The solicited guidance, which the Fellows will provide, will enhance the capability of ASM as a technical community of materials science and engineering in the years ahead. Awards will be presented at ASM’s annual Awards Dinner, Tuesday, October 9 in Pittsburgh, Pa., during Materials Science & Technology 2012 (MS&T’12).

Dr. James B. Adams
President’s Professor and Materials Chair
Arizona State University, Tempe
For distinguished contributions in computational materials science, in particular, the development of highly reliable interatomic potentials.

Prof. Arvind Agarwal
Professor
Florida International University, Miami
For internationally recognized contributions to the field of plasma spray, carbon nanotube reinforced ceramic- and metal-matrix composite coatings.

Dr. Suresh S. Babu
Associate Professor
Ohio State University, Columbus
In recognition of outstanding and distinguished contributions in physical metallurgy that have advanced the science and technology of materials joining in academia and industry.

Prof. David F. Bahr
Professor and Head
Materials Engineering
Purdue University, West Lafayette, Ind.
For significant contributions to the understanding of small scale mechanical behavior, particularly through nanoindentation.

Prof. Amit Bandyopadhyay
Professor
Washington State University, Pullman
For outstanding publications, licensed inventions, and journal editing in the fields of ceramics and biomedical materials science, engineering, and manufacturing, and for the mentoring of undergraduate and graduate students in interdisciplinary fields.

Dr. Robert Bianco
Research and Development Manager and Associate
Goodrich Corp., Brecksville, Ohio
For expanding the application of materials engineering and failure analysis principles to problem solving in applications for the power production and rail industries.

Prof. Long-Qing Chen
Professor
Penn State University, University Park, Pa.
For outstanding development of computational and experimentally verified models for predicting phase transformations, micro-structural evolution, and ferroelectric and magnetostatic structure-property relationships, in metals, ceramics, and thin films.

Prof. Chun-Hway Hsieh
Professor
National Taiwan University, Taiwan
For significant contributions to the development of closed-form analytical solutions to the thermomechanical behavior of materials.

Mr. John A. Janiszewski
Senior Engineer
LTK Engineering Services, Ambler, Pa.
For expanding the application of materials engineering and failure analysis principles to problem solving in applications for the power production and rail industries.

Dr. Prasad Rao Kalvala
Professor
Indian Institute of Technology, India
For innovative and pioneering contributions toward the development of solid state metallic coatings by friction surfacing to combat wear and corrosion and the development of novel weld techniques for improved weld properties for engineered alloys.

Dr. Stephen L. Kampe
Professor
Michigan Technological University, Houghton
For contributions to the science and technology of functional metal-matrix composites and leadership in engineering education.

Prof. C. Robert Kao
Professor and Department Chair
National Taiwan University, Taiwan
For important advances in understanding phase equilibria and interfacial reactions in materials used in electronic devices and their packaging.

Dr. Toshihiko Koseki
Professor
University of Tokyo, Japan
To recognize outstanding accomplishments in the fields of solidification and welding of
steels. This work has been both fundamental and applied and has led to a significant improvement in our understanding of welding metallurgy.

Mr. William J. Lenling
President
Thermal Spray Technologies, Sun Prairie, Wis.
For entrepreneurship and technical leadership in the implementation of functional thermal spray coating to enhance material performance and extend component lifetimes.

Dr. Bernard Q. Li
Sr. Principal Materials Engineer Technical Fellow Medtronic, Minneapolis, Minn.
For distinguished material science contributions to medical device applications.

Dr. Stanley Peter Lynch
Principal Research Scientist Defense Science and Technology Organization, Melbourne, Australia
For outstanding contributions to understanding fundamental aspects of environmentally assisted cracking, especially using metallographic and fractographic techniques, and for using such understanding for failure-analysis and prevention activities in a wide variety of materials.

Mr. Ajay P. Malshe
Distinguished Professor of Mechanical Engineering University of Arkansas, Fayetteville.
For the invention, development, and commercialization of the world’s first nano-particle composite coating of super-hard cubic boron nitride (cBN) for cutting tools and wear resistance applications, as well as various nanomanufacturing processes and lubricants.

Dr. Tatsuki Ohji
Prime Senior Research Scientist National Institute of Advanced Industrial Science and Technology, Japan
For the in-depth investigation of mechanical and functional properties of advanced ceramics, ceramic composites, and porous materials and their microstructures, and the development of new and novel advanced ceramic materials.

Dr. Tripcicane A. Parthasarathy
Materials Research Scientist UES Inc., Dayton, Ohio
For distinguished contributions to the field of computational materials engineering.

Dr. Janet M. Sater
Research Staff Member Institute for Defense Analyses, Alexandria, Va.
For outstanding technical contributions to Defense metal-matrix composite and morphing-materials programs.

Ms. Julie M. Schoenung
Professor University of California, Davis
For distinguished contributions to processing and characterization of nanocomposite materials and to green engineering and design.

Dr. Oscar Marcelo Suarez
Associate Professor University of Puerto Rico-Mayaguez, Mayaguez, P.R.
For contributions to nucleation phenomena in cast iron, and the development of industrial methods to produce graphitic irons.

Dr. George J. Theus
President Metallurgical Engineering Ltd., Aurora, Ill.
For outstanding contributions to the nuclear energy industry and the fields of corrosion, materials engineering, reliability, and failure analysis.

Prof. Armelle Vardelle
Professor University of Limoges, France
For important advances in both modeling and diagnostics of thermal spray processes, including two- and three-dimensional aspects.

Dr. Qigui Wang
For distinguished and sustained contributions to the applied and theoretical understanding of fracture and fatigue of castings, and pioneering development of computational models linking processing, microstructure and properties in aluminum automotive powertrain components.

Nomination Deadline for the 2013 Class of Fellows is Fast Approaching!

The honor of Fellow of the society was established to provide recognition to members for distinguished contributions in the field of materials science and engineering, and to develop a broadly based forum for technical and professional leaders to serve as advisors to the Society.

Criteria for the Fellow award are: outstanding accomplishments in materials science or engineering; broad and productive achievement in production, manufacturing, management, design, development, research or education; and five years current continuous membership.

Deadline for nominations for the class of 2013 is November 30, 2012.

Complete information including rules, interpretive comments, and user-friendly online nomination forms are available on the ASM website at http://www.asminternational.org/portal/site/www/membership/award-nominations/, or by contacting Christine Hoover at tel: 440/338-5151, ext. 5509; email: christine.hoover@asminternational.org.
EMERGING PROFESSIONALS

MS&T 2012 Symposium for Emerging Professionals: Early Strategies for Career Development

Mark A. Tschopp
Mississippi State University

Where do you want to go with your career? For more established engineers, the answer may come easily, having had the time to give some thought to this question over a number of years. However, for early career professionals, the answer to this question may not always seem so obvious.

If you are attending the MS&T’12 Conference & Exhibition in Pittsburgh, Pa. (October 7-11, 2012), you have the opportunity to hear from materials professionals who have taken many different career paths and who will share the narrative of their career so that early career professionals can make informed decisions about their own career paths. The ASM Emerging Professionals Committee is excited to announce the 5th Annual Symposium Perspectives for Emerging Materials Professionals: Early Strategies for Career Development. The symposium is specifically designed for the emerging professionals community and is part of Tuesday’s day-long programming for the early career professional.

This year’s program includes invited presentations from an outstanding group of speakers, ranging from those already well-established in their field to those in the early stages of their careers. The topics include: seasoned career perspectives and advice from government labs, academia, and industry; entrepreneurship, small business, licensure, and intellectual property; international experiences; and emerging careers and professional development in the new economy. Moreover, we are proud to announce that there will be two keynote speakers who will impart their wisdom for emerging professionals at this symposium: Dr. Ian M. Robertson, FASM, NSF DMR director and ASM President-Elect, Dr. Germant E. Maurer, FASM.

On behalf of the Emerging Professionals Programming Subcommittee, we would like to personally extend an invitation to attend this symposium. This symposium will provide an excellent opportunity to interact with both emerged and emerging professionals alike. We hope to see you there!

If you have any questions or would like to participate in future Emerging Professional symposia, feel free to contact the symposium organizers: Mark A. Tschopp, Mississippi State University, mtschopp@cavs.msstate.edu; Greg Oberson, U.S. Nuclear Regulatory Commission, greg.oberson@nrc.gov; Umesh Patil, Caterpillar Inc., patil_umesh_s@cat.com; Olly Rowan, Caterpillar Inc., rowan_olga@cat.com; and Chirag Shah, Exova, chirag.shah@exova.com.

ASM’s 2012 International Student Paper Contest Winner

Dr. Indranil Lahiri
Research Assistant Professor
University of North Texas, Denton

Dr. Indranil Lahiri received his Ph.D. from the Department of Mechanical and Materials Engineering, Florida International University, Miami, in the fall 2011 and continued as post-doctoral researcher in the same department until summer 2012. He recently joined University of North Texas, Denton, as a research assistant professor. Previously he worked as scientist for an R&D institute in Hyderabad, India, for more than seven years. His education includes a masters degree from IIT Kanpur, India (2000) and bachelors degree from Bengal Engineering College, India (1998), both in materials engineering.

Dr. Lahiri will be recognized at the Leadership Luncheon on Monday, October 8 in Pittsburgh, Pa. at MS&T’12 for his paper entitled Interface control: A modified rooting technique for enhancing field emission from multiwall carbon nanotube based bulk emitters.

Indranil is an active member and leader of the Material Advantage chapter at Florida International University. He served as secretary (2008-09) and chair (2009-10). He also served as Student Board Member during 2010-11.

ASM Indian Institute of Metals Announce Recipients of 2012 Visiting Lecturers

The cooperative Visiting Lecturer program of ASM International and the Indian Institute of Metals (IIM) is pleased to announce the four distinguished individuals named to participate in the 2012 Visiting Lecturer program: Dr. Hua-Tay Lin, Research Group Leader, Oak Ridge National Laboratory, Oak Ridge, Tenn.; Dr. Shaoming Dong, Director, Shanghai Institute of Ceramics, Chinese Academy of Sciences, Shanghai, China; Prof. Shalini Prasad, Associate Professor, University of Texas, Richardson; and Prof. Kumar Sridharan, Distinguished Research Professor, University of Wisconsin, Madison.

The award carries with it an $800 honorarium to be used for travel expenses within India during the lecturer’s visit and a certificate of recognition to be presented at the ASM Leadership Awards Luncheon scheduled for October 8 in Pittsburgh, Pa., during MS&T’12.
Chapter News

Detroit – ASM Materials Teachers Camp Marks 11th year

Another successful ASM Materials Teachers Camp was completed in Ann Arbor, Mich. where 22 middle and high school science, technology, engineering, and math (STEM) teachers attended classes and conducted lab experiments with a variety of materials. The teachers were given the opportunity to work with metals, ceramics, and polymers to learn about their characteristics and uses, with the goal of passing that knowledge on to their students through hands-on lab experiments. As part of the curriculum, the teachers toured a state-of-the-art materials manufacturing facility, Severstal North America at the Rouge Complex in Dearborn, Mich. The ASM Detroit Chapter and its membership proudly supported the camp with cash donations to the ASM Materials Education Foundation earmarked for the Camp in Ann Arbor. Many members also volunteered their time as lab assistants and drivers for the tour.

Ottawa – ASM and NACE Collaborate on Teachers Camp

Ashbury College was the site of the fourth annual ASM Materials Camps for Teachers, held in Ottawa, Canada, July 2-6, in close collaboration with the NACE Foundation of Canada. The Chapter is grateful to all the financial supporters. Benefactors Patrons: ASM Materials Education Foundation, NACE Foundation of Canada, and Vale; Sponsor: CSA Group; Supporter: ASM Ottawa Valley Chapter; Patrons: ASME Pipeline Systems Division, AUTO 21, Canadian Association of Petroleum Producers (CAPP), Canadian Energy Pipeline Association (CEPA), Cement Association of Canada, Enbridge Gas Distribution, NACE Canadian National Capital Section, and NACE International Foundation; Partners: Ashbury College, ASM Materials Camp Canada, and NACE Northern Area.

Eisenman Materials Camp

The 13th annual ASM Eisenman Materials Camp took place July 15-21 at Materials Park, Ohio. Dustin Turnquist, Engineering Systems Inc., served as curriculum leader. A team of 14 mentors assisted him in developing the week’s activities designed to excite high school juniors and seniors to explore careers in materials, science, and engineering.

The 2012 Eisenman Materials Camp participants and mentors gather under the Dome.

Camper Kaleigh Smith is suited up for her heat treating and quenching duties.

Dustin Turnquist leads his student team in a failure analysis investigation.

Graduation photo on the lawn outside Ashbury College on July 6.

Official ASM Annual Business Meeting Notice

The Annual Business Meeting of members of ASM International will be held in conjunction with MS&T’12 on: Monday, October 8, 2012 4:00 p.m. – 5:00 p.m. David L. Lawrence Convention Center, Pittsburgh, Pa. The purpose of the ASM Annual Business Meeting is the election of officers for the 2012-13 term and transaction of other society business.
Members in the News

Suryanarayana Awarded Jefferson Science Fellowship

Dr. C. Suryanarayana, FASM, professor of materials science and engineering at the University of Central Florida in Orlando, has been chosen as a 2012-13 Jefferson Science Fellow (JSF) by the National Academies of Science and the U.S. Department of State. The JSF program was established in 2004 as an innovative model for engaging American academic science, technology, engineering, and medical communities in U.S. foreign policy. Suryanarayana will serve a one-year assignment engaging in the formulation and implementation of U.S. foreign policy for an office within the State Department or the U.S. Agency for International Development. Following the fellowship year, he will return to UCF, but will remain available for five years as a consultant to the U.S. government on short-term projects.

U.S. News Inducts Five to STEM Leadership Hall of Fame

Mary L. Good, ASM Distinguished Life Member (1991), was among five experts named to the first class of the U.S. News STEM Leadership Hall of Fame for her role in advancing science, technology, engineering, and math (STEM). An awards ceremony took place at U.S. News & World Report’s inaugural STEM Solutions 2012 Summit in Dallas in June, where educators, business leaders, and policymakers, shared ideas for improving STEM education. Without a serious commitment to STEM, “we are not going to have the standard of living that we had in the past,” said Good, special adviser to the chancellor for economic development at the University of Arkansas–Little Rock. “We’re to the point, in my opinion, where it’s the national security that is at risk.” Those implications mean more attention should be paid at the national level, with better communication among the government agencies that have a hand in STEM.

Clarke Honored with Presidential Award

In July, President Obama named 13 U.S. Department of Energy-funded researchers as recipients of the Presidential Early Career Award for Scientists and Engineers (PECASE). This is the highest honor bestowed by the U.S. government on outstanding scientists and engineers, who are early in their independent research careers. Dr. Amy J. Clarke of Los Alamos National Laboratory, was recognized for her research on uranium-niobium alloy deformation mechanisms using micro-pillar compression testing to determine the influence of orientation on stress-strain response, for using in-situ solidification and proton radiography with potential to finally resolve liquid-solid processing questions relevant to nuclear weapons, and for mentoring future ferrous metallurgists. In addition to a citation and a plaque, Clarke will continue to receive Energy Department funding for up to five years to advance her research.

Undergraduate Beats Graduate Students to Win International Lecture Event

Brain Weden, a University of California (UC), Riverside Bourns College of Engineering student, won the 2012 Institute of...
Materials, Minerals and Mining (IOM3) international lecture competition in London in July. Weden, 21, the only undergraduate in the competition, beat graduate students, ages 25 to 28, from seven countries. Weden does research with David Kisailus, an assistant professor in the chemical and environmental engineering department. He credits Kisailus for developing his lecturing style, which focuses on telling stories, weaving in jokes, and using a lot of images with few words on PowerPoint slides. Weden graduated from Don Bosco Technical Institute in Rosemead, where he studied materials science. In March, Weden won the U.S. Western Regional Young Persons’ Lecture Competition, which was held at the UC Riverside Bourns College of Engineering.

Gupta’s Knowledge Aides Summer Olympics

Dr. Nikhil Gupta, associate professor of mechanical and aerospace engineering at Polytechnic Institute of New York University (NYU-Poly), shared his expertise on composite materials and foams to explain how helmets are designed to protect athletes from injuries for a segment of NBC Learn sponsored by the National Science Foundation (NSF). “Designing Safety Helmets” was part of the series, “Science of the Summer Olympics: Engineering in Sports,” produced for the London Olympic Games. Gupta’s research – supported by the NSF, the Office of Naval Research, and the Army Research Laboratory – looks at the development of next-generation protective materials. The video demonstrates procedures for rigorously testing the helmet foams using impact and compression test machines. He also demonstrated “invisible” damage using ultrasound imaging and an electron microscope. To see more, visit www.nbclearn.com.

IFHTSE New Fellows

The International Federation for Heat Treatment and Surface Engineering (IFHTSE) announced its 2012 class of Fellows. Among them is Dr. George Vander Voort, FASM, of Vander Voort Consulting in Wadsworth, Ill. Vander Voort was cited for “his valuable contributions over many years to the study of effective use of metallurgy; not only do his publications in the field set a standard of authority, he is widely appreciated and acknowledged as a leader in the development and delivery of educational short courses on metallographic characterization for a wide range of engineering materials.” Prof. Bozo Smoljan of University of Rijeka, Croatia, was also named IFHTSE Fellow. Smoljan’s citation is “in recognition of frequent and significant contributions on thermal process modeling of materials, notably steel; also on hardenability, heat treatment, and quenching, in general.” The new Fellows receive a presentation plaque provided by Houghton International, Valley Forge, Pa.

New 2-Day Course

Medical Device Design Validation and Failure Analysis

ASM International is pleased to offer a new blended course that combines lecture and hands-on laboratory exercises, Medical Device Design Validation and Failure Analysis. The course, offered November 7-8, 2012 at Materials Park, Ohio, provides a fundamental understanding of the design process necessary to make robust medical devices. Fracture, fatigue, stress analysis, and corrosion design validation approaches are examined, as well as failure analysis techniques.

Papers Sought for ASM HTS/Bodycote ‘Best Paper in Heat Treating’ Contest

The ASM Heat Treating Society established the Best Paper in Heat Treating Award in 1997 to recognize a paper that represents advancement in heat-treating technology, promotes heat treating in a substantial way, or represents a clear advancement in managing the business of heat treating.

The award, endowed by Bodycote Thermal Process-North America, is open to all students, in full-time or part-time education, at universities (or their equivalent) or colleges. The winner will receive a plaque and a check for $2500. Paper submission deadline is December 14, 2012. Visit the HTS website at http://hts.asminternational.org for the award rules, or contact sarina.pastoric@asminternational.org.

Seeking Nominations for Thermal Spray Hall of Fame

The Thermal Spray Hall of Fame, established in 1993 by the Thermal Spray Society of ASM International, recognizes and honors outstanding leaders who have made significant contributions to the science, technology, practice, education, management, and advancement of thermal spraying. For a copy of the rules, nomination form, and list of previous recipients, go to www.asminternational.org/tss and click Networking and Membership and then TSS Awards. Or, contact Sarina Pastoric at sarina.pastoric@asminternational.org. Nominations are due September 30, 2012.

Please submit news of ASM and its members, chapters, and affiliate societies to Joanne Miller, joanne.miller@asminternational.org
Our choices in life are often influenced by a particular person or a memorable experience. For Amber Black, one of those was the “gold penny” experiment in high school. In a science project, she dropped a penny in boiling sodium hydroxide and zinc, then heated it over a Bunsen burner until it turned into “gold.” Amber was amazed and hooked.

At the University of Connecticut, she found her place – in engineering. There Amber got involved with ASM, serving on the Hartford chapter’s executive committee and as vice-president and president in the Material Advantage student chapter. "It wasn’t a real active chapter, so I helped revamp it. Now they continue to win awards."

At an MS&T conference, Amber met her current advisor at Penn State, Dr. Judith A. Todd, FASM, who encourages her to stay involved with ASM. Amber is currently a graduate student in engineering science and mechanics researching laser sustained plasma for the development of hard surface coatings.

In academic and career decisions, ASM has been a determining force. "I wouldn’t be at Penn State if not for ASM connections. People have helped me figure out what I wanted to do, every step of the way. I’m an NSF Graduate Fellow, and all my reference letters were from ASM members.”

Amber enjoys mentoring undergrad students and will no doubt encourage their involvement in ASM. Her own dream is to work in a national laboratory doing analytical work.

Currently, she serves ASM at the national level, on the Emerging Technologies Awareness Committee and as incoming vice-chair of the Volunteerism Committee.

“I love meeting people at conferences and on committees,” says Amber. "They have really interesting stories and are passionate about their work.”

In Amber’s family, volunteerism is a strong value. Her mother mentors others in her civic involvements and encourages Amber to do the same.

Amber Black
Pennsylvania State University

A new ASM member benefit – discounted shipping!

PartnerShip
Your Shipping Connection

800-599-2902
sales@PartnerShip.com
PartnerShip.com/09ASM

Improved Training Prevents Poor Performance

ASM will customize any of our materials training programs for your applications and your employee needs.

Choose from training programs in:
- Materials Engineering
- Failure Analysis
- Heat Treating
- Metallurgy
- Laboratory Methods, and more

Your employees don’t have to travel, resulting in lower training costs.
Train employees at all skill levels and stay competitive with better trained staff.

We have trained engineers, R&D, sales, technicians, scientists at organizations just like yours, including:
- NASA
- US Department of Defense
- Duke Energy
- Los Alamos National Laboratory
- Boeing
- Honda

Ask for your FREE, no-obligation training assessment and get a FREE Periodic Beer Glass.
(Did you know that Carlsberg Brewery was the location of Soren Sorensen's work on the pH scale?)

Contact John Cerne for complete details.
1.800.336.5152, ext. 5637
Email: john.cerne@asminternational.org