

NEWSLETTER

Department of Metallurgy and Mining Engineering

University of Illinois at Urbana-Champaign

January 1982

M&M Constituency Plans Activities

Last year we reported the formation of a board of directors of the Mining and Metallurgy Constituency Association, to work closely with the UofI Alumni Association. These officers are: Glen Wensch '46 PhD '59 President; Bob Bohl '46 PhD '56, Secy-Treasurer; Russ Duttweiler '60; Jonathan Smith '47; Joe Darby PhD '58; Ted Wilken '73; and Chuck Squarcy '36.

Last May, Glen took the oath to become a member of the Board of Directors of the UofI Alumni Association. In December, Glen met with the Constituent Committee of the Alumni Board to discuss the functions of the committee and its relationship to the department and the alumni association.

These discussions revealed that the number of alumni from the departments in the University range from a high of 43,720 (LAS) to a low of 612 (TAM); M&M is 1198. It was also noted that some of the larger constituent associations met once or twice a year. These meetings were on behalf of the respective departments to provide recommendations to the alumni association on awards programs and other activities such as scholarships, funding requirements from external sources, etc. The different constituent groups do not appear to be highly structured.

Charlie Wert and Jim Vermette (President of the UofI Alumni Association) are in general agreement that we should move ahead slowly with more exploratory discussions to define the mutual needs of our department alumni and how the M & M constituent association can best meet them.

Plans are now being firmed up to convene the constituent directors during the 1982 annual

BUDGETS AND ADMISSIONS ARE TIGHT

Demand for undergraduate admission to engineering has reached unprecedented highs, creating a number of severe problems. In the past decade, financial support to the University has decreased about 10% in fixed dollars. Because the campus administration has not allocated resources to engineering in proportion to its increase in enrollment, the college's decline in support is actually about 40%.

The result in engineering is an erosion in quality of education, especially in terms of student/faculty ratios, facilities such as library and laboratories, and the ability to attract and hold outstanding faculty. Efforts to maintain faculty salaries at a semblance of competitive levels has stripped budgets for operating and equipment expenses.

Another effect has been restrictions on enrollment that make the cut-off levels for admission irrationally low. For last Fall's freshman class, the median ACT score was 28.73 and the median high school class rank was over the 96th percentile. The college plans to cut admissions by 10% next Fall, so these numbers will be even more restrictive next year. Academic requirements for transfer students are also reaching unreasonable highs.

Decreases in Federal support to education and research make the situation even more grim. We can pressure for State appropriation and more equitable al-

location within the campus. Tuition fees, long restrained by political pressures, have begun to rise. Perhaps declines in the college-age population or a move away from engineering education, as we saw in the 60's, will alleviate the problem, but these are uncertain and distant solutions. Meanwhile, in addition to enrollment cuts, the college administration is contemplating such actions as elimination of minority programs, the industrial engineering curriculum, and the power option in electrical engineering as ways of meeting the budget crunch.

To maintain metallurgy enrollments in the face of these problems has not been easy. We have been able to maintain the undergraduate enrollment almost constant this year (106 vs 110 last year), but only by a vigorous recruiting effort. Two more companies, Kaiser and Wells Manufacturing, have joined this program during the year, and we now have nineteen companies contributing about \$25,000 annually for grants to encourage students to study metallurgy.

Graduate enrollment has increased from 72 last year to 90 this year; a tribute to the quality of the research of our staff, as well as an effect of the growth of the polymers program.

Alumni can help by stressing the importance of higher education budgets to local legislators, and encouraging industrial support wherever possible.

meeting of the ASM and AIME to obtain their ideas on the next steps. Louis Liay (Vice-President of the Alumni Association) would also be available to give the benefit of his experience in establishing alumni department representation.

We are impressed with the

U of I Alumni Association and urge all of our graduates to become members. A portion of annual and life membership dues are returned to the department to sponsor alumni activities (\$2.25 and \$30, resp). The directors would welcome suggestions from alumni at any time.

DEPARTMENT NOTES

Atlantic-Richfield has recently announced a \$125,000 grant to the department to be used to encourage graduates to seek careers in engineering education. Over a three-year period, these funds will be used in two major ways. Part of the funds will be designated at the discretion of our young faculty to assist them in their research efforts. The balance of the grant will be used to sponsor fellowships to be awarded to outstanding students, especially those contemplating careers in teaching. We greatly appreciate ARCO's sensitivity to the need to make education an attractive career, and their recognition of our merit and ability to carry out this program.

EXXON has established a fellowship in the department in the amount of \$11,000 annually on a continuing basis. The amount covers a stipend, tuition and fees and some miscellaneous expenses for a graduate student. EXXON has not restricted the area of research in which the fellow chooses to work.

Caterpillar Tractor Company has made a pledge of \$500,000 to the College over the next five years. This sum is designated for several purposes, with \$7000 annually earmarked for metallurgy. These funds will be used for severely needed equipment for our teaching laboratories.

Stuart Stock was awarded an IBM predoctoral fellowship this year to work in x-ray topography of Nb-H single crystals.

Grants such as these are crucial to our program in these days of tight budgets.

Charlie Wert spent the Spring semester last year on sabbatical leave in Germany. When he wasn't evaluating the German brats and beer, he carried out research to characterize the polymer nature of coal, aimed at understanding the structure and properties of coal. This was done with colleagues at Stuttgart and the Technical University at Munich. Charlie was also able to visit several coal areas in Germany. He will return to Germany this May, under provisions of the Humboldt Award he

received, to continue the program of work and visits.

Charlie has recently been honored by being named a Fellow of the AAAS.

Fred Lawrence has also spent a sabbatical semester in Germany. Fred was at Karlsruhe this past semester, conducting welding research with Hubert Hilsdorf, a colleague of Fred's from when Hubert was on the staff here several years ago.

Howard Birnbaum spent a month in Japan this Fall, attending meetings on defects in metals and visiting laboratories doing work on hydrogen effects in metals.

Ted Rowland spent a Fall semester sabbatical at Ames Laboratory, which is affiliated with Iowa State University. He worked there with a number of familiar colleagues, primarily on the effects of dissolved hydrogen on the mechanical properties of V-Ti alloys. Ted says though he missed the sport of teaching and badgering students, he and Pat enjoyed their time at Ames, and have returned this semester renewed in mind and spirit.

Ted was recently honored by being named a Fellow of the American Physical Society, a distinct honor in view of the very high standards of selection now in force.

Bob Bohl, who joined the department faculty as an instructor in 1946, retired from the University this Fall, but will continue some teaching, advising, and administrative duties on a part-time basis. One of these activities he continues is the preparation of the annual Newsletter, which he began in 1948, and can no longer disavow. This fact rather inhibits any additional remarks about this long period of teaching. All will no doubt agree that he has enjoyed his association with students over the years and takes great pride and satisfaction in their accomplishments in the years follow-

ing their graduation. The many thoughtful comments and activities of students and colleagues to celebrate this event are deeply and sincerely appreciated, even if they do make Bob harder to get along with at home.

Last May, a symposium was organized by the department's polymers group for current and potential industrial affiliates. Forty-five industrial representatives attended and heard presentations by polymers faculty and graduate students. We expect this successful program to become an annual affair. Activity in the polymers area continues to grow. Shell Development is sponsoring research on polybutylene morphology-property-processing relationships, the mechanisms of deformation and effects of phase transformation and thermal history (in melt and solution). An Hitachi 11A electron microscope and a cryogenic torsion pendulum have been acquired.

Maryin Wayman has received a three-year grant from the International Copper Research Association to study aging effects in copper-base shape memory alloys. Mary was recently named to the editorial board of Metallography.

Haydn Chen is participating in a national effort to design and construct an x-ray topography facility at Brookhaven National Lab with the use of the high flux synchrotron radiation. Within the department, Haydn received a \$215,000 NSF-Research Board grant to develop a minicomputer-controlled x-ray diffraction system.

On the lighter side, the First Annual Micrograph Madness contest was organized last Fall. Nineteen entries were judged by the secretarial staff. This no doubt will compete with Fred Lawrence's welding class artistic welding competition which is an established event on our calendar. A round-robin volleyball tournament ran through the Fall semester, with teams or-

ALUMNI NOTES

Robert W. Sanford '23 died April 11, 1981. Mr. Sanford had an illustrious career, principally with the Bureau of Mines. Highlights include his discovery of oil seeps on the Alaskan North Slope in 1943 and the modernization of coal and lignite mining operations in Afghanistan and India. Prior to joining the Bureau in 1940, he had mined in South America, Mexico, Canada, Nevada, Colorado, Oregon and Oklahoma. When he retired in 1970, he continued an active life, including writing, consulting, jewelry crafting and learning to water ski.

Henry Gross '33 has sent a check for the Alumni Fund and some reminiscences of the old days. Henry is in retirement in Webster Groves, MO, and like many of the older alumni (those are people who graduated before I did) whom we admire so much, maintain a strong interest in the department.

Charles Beattie, Jr. '35 has retired from Armco, Inc. after forty years of service. Chuck is still living in Middletown, OH.

Charles Squarcy '36, who is busier now than before he retired from Inland, has joined the departmental alumni constituency directors and is also serving on the College's Alumni Fund. The Fund solicits gifts from alumni which are allocated to the department from which the donor received his degree. We are very pleased with the response our graduates have made to this appeal. These funds are extremely valuable, especially in this era of great austerity when most resources are earmarked for specific uses. Our alumni funds are dedicated to "extras" to assist undergraduate student activities.

Organized by research groups, class in school, and other valid excuses. Combat casualties were considerably less frequent than those received by the University's club rugby team that is coached (and led to Murphy's Pub) by Prof. Hamish Fraser.

Thomas J. Riggs '41 has been elected to the board of directors of the Smaller Business Association of New England. Tom is president of Lawson-Hemphill, Central Falls RI, a producer of quality control instruments and equipment for the textile industry.

Robert Ray '44 has been named a Trustee of the American Society for Metals. Bob is a consulting metallurgist in the Bay Area and also serves as instructor and department chairman for metals technology at the Peralta Junior College in Oakland. Bob joins Harold Gegel '55 on the ASM Board; Hal was elected to a three-year term in 1980. He is senior scientist in the materials laboratory at Wright-Patterson AFB.

John Bell '43 has retired after a long career with Western Electric in their Hawthorne Works, Chicago. John held many positions at Hawthorne, and was particularly noted for developing a revolutionary copper rod manufacturing process. John and his wife will continue to reside in Naperville, where John will take on some consulting work in his retirement.

H. P. Leighly '58 PhD '52 spent last summer at NASA's Marshall Space Center in Huntsville as a participant in the summer faculty fellowship program. Phil is professor of metallurgy at Missouri-Rolla with primary interests in electron microscopy, defect structure and mechanical properties.

Among those honored by designation as Fellows of ASM this year were Kaii Mukherjee PhD '63, W. H. Coutts '54, and George Sinclair '48 MS '49. Kaii is now professor of metallurgy at Michigan State following a long tenure at New York University. He was recognized for his work in martensite transformations and defect studies in splat-quenched alloys as well as his excellent record as an outstanding teacher. Red Coutts was honored for his contributions to developments in hot forming of super-alloys. Red

is with Wyman-Gordan in Massachusetts, and is bringing up his daughter, Ann, to be an Illini metallurgist. George has been on the staff of the TAM department at Illinois about as long as anyone, and was honored for his many contributions to the understanding of the mechanical behavior of metals, especially fatigue and fracture.

We have the new address of Bob Bertossa '49, P.O. Box 1257, Aptos, CA 95003, through the courtesy of his sister-in-law Phyllis (Don) '50 Bertosa.

Herman Petsch '50 is preparing for a new career in teaching and biblical studies research by working on a graduate degree at the Assemblies of God Graduate School. He has been elected to "Who's Who Among Students in American Universities and Colleges." In the interim, Herman is working as a metallurgical engineer in the nuclear engineering and design division of TVA in Knoxville.

We are pleased to resurrect Calvin O. Davies '50 who was listed "deceased" in our directory. Calvin is alive again, and living at 891 Miller Ct., Ventura, CA 93003. We're working now on turning water into wine.

Don Macleary '51 has been named National Account Manager, Forging Industry Products for Universal-Cyclops Steel. Don has been with Cyclops since 1964 with various sales responsibilities.

We are very sorry to learn that John G. Scherer '53 died in April 1977. Our belated condolences to his wife, Pat.

Gerald Robinson '55 visited last Fall during a college inspection tour with his college-bound son. Gerry, who took a law degree after leaving Illinois, has been in commercial real estate. His latest acquisition is the Cincinnati Gardens, and he is now cast in the role of entrepreneur.

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ALUMNI NOTES

Robert Wehrle '58 has been appointed manager of corporate planning for Standard Oil (Ind), heading the group charged with developing overall worldwide corporate strategy. Prior to this position, Robert held various appointments with Amoco Int'l in Chicago, Buenos Aires, London, Cairo, and New York.

G. Ron Morris '59 is now president and chief operating officer of Tenneco Automotive Division of Tenneco, Inc. in Deerfield, IL. Ron had 20 years experience in metallurgy, manufacturing, and management assignments with GM, Deere, and Federal-Mogul prior to joining Tenneco.

Bob Willard '59 has left Atomics International and returned to the University as a graduate student, where his 22 years of professional experience makes him somewhat unique among his colleagues.

Bob Siddall '64 has returned to Gary as superintendent of the steel-producing division of U.S. Steel's Gary Works. Bob had been at Gary since graduation, mostly involved in continuous casting. He spent three years in USS's Texas Works prior to this promotion.

Nabendu S. Choudhury, MS '68, is now at GE's R & D center in the electrochemistry branch. He was formerly in GE's Energy

Systems program. Choudhury received his PhD from Iowa State and a masters in management science at Dayton. Before joining GE, he was with NASA-Lewis, Argonne Lab, and Wright-Patterson AFB.

Larry Happ '68 is now welding and materials engineer with Crepaco, Inc., Lake Mills, WI 53551.

M. S. Rashid PhD '69 is now assistant head of the metallurgy department at GM Research Laboratories. Rashid has been at GMR since 1972, and has been recognized for his outstanding work in the development of high-strength formable steels.

K. K. Chawla PhD '71 met with an alumni association tour and sent greetings back to old friends here. Krishan is professor and post-graduate division director in the Institut Militar de Engenharia, Rio de Janeiro.

John Balkonis '72 is now general manager, Whitin Castings Co. division of White Industries, in Whitinsville, MA.

R. K. Viswanadhan PhD '73 visited us in connection with some work in cooperation with Marvin Wayman. Vis is supervisor of materials research for Reed Rock Bit in Houston and has been busy organizing an International Conference on the Science of Hard Materials to be held Aug. 23-28 in Jackson, WY.

Daughter Madhuri now has a baby brother, SriKent.

S. Chakravorty, PhD '75, is now working for the leading wire/wire rope maker in India, and is R & D manager in charge of steelmaking. Chuck's address is Usha Scientific Research Institute, Tatisilwai-Ranch, India.

Tom Odom '75 MS '76 is now working for EXXON and has moved to 3510 Newman Dr., Baytown, TX 75521. The Odoms (daughter Susan will soon have a sibling) are enjoying the new job and climate after leaving Union Carbide Nuclear in Kentucky.

Tom Bond '77 MS '78 has passed the professional engineers exam last May (in spite of the lack of metallurgy questions) which was a good thing for him, since his wife Lynn (an IE) also passed the same exam. Both are working for Caterpillar in Peoria.

Ken Goretta '78 has left Caterpillar and is now working at Nalco Chemical in Naperville and living at 321 Osage Lane, Naperville, IL 60540. Ken's supervisor is Bob Port '70. Ken has begun graduate study on a part-time basis.

Keith Meyer '80 is a design engineer in the materials and processes department of McDonnell-Douglas Astronautics in St. Louis.

Are you
a member
of the
Alumni
Association
?

More than 75,000 alumni are - including approximately 43,000 who are life members. As a member you'll receive the Illinois Alumni News or Medical Center Alumni News or The Circle Alumni News, as well as publications of your college or departmental constituent association. You'll qualify for our tour program, our insurance program and the annual family camp. And you'll continue your loyal involvement with something great - your University of Illinois. To join, either as an annual member or as a life member, return this form with your check to: Alumni Association, 227 Illini Union, Urbana, Illinois 61801. (Make your check payable to the University of Illinois Alumni Association.)

- One year single membership—\$11 One year husband-wife—\$14
 SINGLE LIFE MEMBERSHIP—\$175. (INSTALLMENT PLAN: \$185—\$10 DOWN, FOUR YEARLY PAYMENTS OF \$43.75.)
 HUSBAND-WIFE LIFE MEMBERSHIP—\$200. (INSTALLMENT PLAN: \$210—\$10 DOWN, FOUR YEARLY PAYMENTS OF \$50.00.)

Name _____

Spouse's name (if an alumnus) _____

If female, list maiden name. Does spouse have a U. of I. degree? _____

Address _____

College _____ College year _____

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