

### Apartheid final

The Institute Colloquium apartheid forum convenes this afternoon (Wednesday, Nov. 6) at 3:30 in Kresge Auditorium with a talk on "The Battle for South Africa" by Dr. Nthato Motlana, chairman of the Soweto Committee of Ten and the Soweto Civic Action Committee.

The talk will be followed by a community-wide reception in McCormick Hall, 5-6pm.

Thursday afternoon will bring a panel discussion, 2:30-5pm also in Kresge on "What Can and Should Americans Do about South Africa." Oliver Tambo, president of the African National Congress, who was scheduled to participate and to give the closing address will be unable to attend. Replacing Mr. Tambo on the panel will be Johnny Makatini, US representative of the African National Congress. Another new panelist will be William Jacobsen of the US State Department Working Group on South Africa. Other panelists are listed in The Institute Calendar, as are all other events scheduled for the two-day forum.

### Early deadline

Because of the Veterans's Day holiday Monday, Nov. 11, the deadline for listings in next week's Tech Talk will be **NOON THURSDAY, Nov. 7.**

In addition, Tech Talk will not be published Wednesday, Nov. 27, because of Thanksgiving vacation. The Institute Calendar in the November 20 issue will cover the period from November 20 through December 3. Listings for inclusion in Institute Notices, the Institute Calendar and Classified Ads in that issue must be submitted by noon Friday, Nov. 15.

### Number, please

The 1985-86 MIT Student Directory has been published. Copies are available in the Information Center, Rm. N7-121.

### United Way

A meeting for chief solicitors for the United Way campaign will be held Friday, Nov. 8, at 2:30pm in the Bush Room (10-105). To date, the campaign has raised \$98,000 toward its goal of \$250,000.

### Book sale

New and used engineering and science publications will be on sale Wednesday, Nov. 13, 10am-4pm, in one of the MIT Libraries' periodic book sales. Included will be textbooks, reference books and technical reports at prices ranging from 50 cents to \$4.

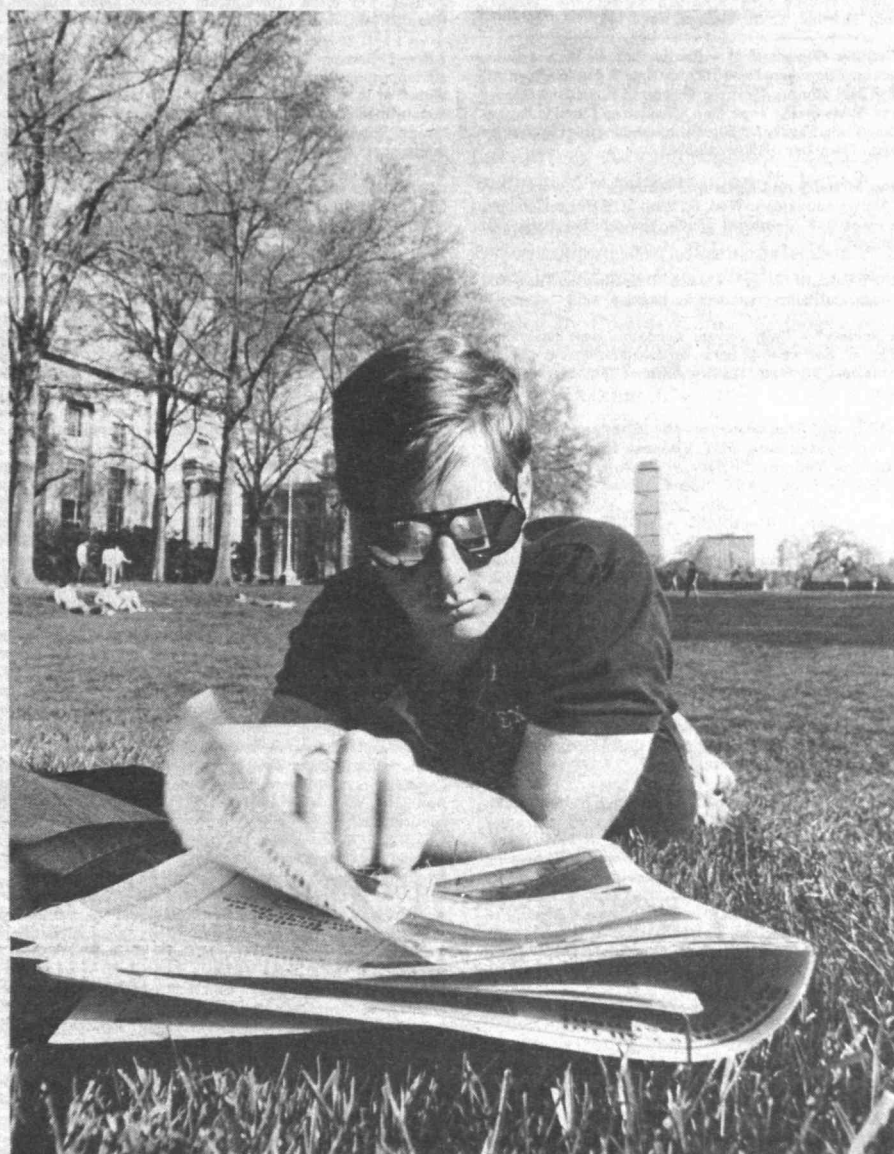
Prices will be lowered as the day progresses, so bargain hunters should plan on stopping by more than once. Proceeds will benefit the Libraries' Preservation Endowment Fund.

### China films

The MIT Association of Visiting Students and Scholars and the US-China Peoples' Friendship Association will screen seven documentary films on the Peoples' Republic of China Sunday, Nov 17 at 1pm in Rm 10-250.

Highlights will be films on Anna Louise Strong, a journalist and labor advocate who lived her last years in China, and a Chinese doctor who uses bees to treat arthritis and rheumatism.

All films are in English and admission is free. Further information may be obtained by calling 491-0577.



## Contest winners announced

The winning pictures from last spring's "Photographic Images of MIT" contest are now on display in the Jerome B. Wiesner Student Art Gallery. The exhibit will continue through November 17.

Ariel Poler, a sophomore in mathematics from Caracas, Venezuela, won first prize (\$300) for the untitled photograph shown above. Bradley T. Files, who received the SB degree in electrical engineering and computer science in June received second prize (\$150) for an entry entitled "Community Service: Fall Carnival." Christine LeBeau, a senior in architecture from Alameda, Calif., won third prize (\$50) for her "Doors in Lobby 7."

Entrants were invited to submit black

and white pictures of MIT in one of six categories: campus scenes, living groups, sports, extracurricular activities, academics or special events. The contest was open to all members of the community—including alumni—and more than 100 entries were submitted.

In addition to the major prizes, the three best entrants in each of the six categories won autographed copies of *Moments of Vision* by Institute Professor Emeritus Harold E. Edgerton and Dr. James R. Killian Jr.

An awards ceremony to honor the winners will be held in the Gallery Friday, Nov. 8, at 2pm.

## Institute adopts smoking policy

Adopted too recently to be included in the 1985 edition of Policies and Procedures (which will be distributed within the next week or two), is a new Institute-wide smoking policy.

The policy is intended to improve the work environment of nonsmokers while treating the dwindling numbers of smokers with consideration, according to Joan F. Rice, director of personnel.

(Massachusetts has a law prohibiting smoking in classrooms and elevators.)

The policy reads as follows:

The Institute recognizes the right of its employees to work in an environment that is relatively free of pollutants.

In the past few years there has been mounting evidence to suggest that tobacco smoke, whether inhaled directly by a smoker or indirectly by a person in the general vicinity of a smoker, is harmful to the health of the smoker and nonsmoker.

In work situations where a nonsmoker is made uncomfortable by a fellow worker's smoke, reasonable accommodation should be made to resolve the nonsmoker's discomfort. It is hoped that such accommodation can be agreed to by those in the work location, with the help and guidance of the supervisor and, if necessary, the Personnel Office.

In work situations where, after reasonable accommodations have been made, the nonsmokers are still suffering discomfort from the effects of "passive smoke," it is Institute policy that the work area be declared a nonsmoking area.

Ms. Rice said there has been a steady rise in the number of complaints about smoke in the work environment, as well as mounting research evidence of the contribution of smoke to indoor air pollution, leading to consideration and adoption of a policy.

"In most cases," she said, "offices have been able to resolve conflicts by themselves. In other cases, the advice of a personnel officer has been helpful, and they stand ready to be of assistance wherever needed."

## Rasmussen receives 1985 Fermi Award

By ROBERT C. DIORIO  
Staff Writer

Dr. Norman C. Rasmussen of the Department of Nuclear Engineering, recognized internationally as an authority on nuclear reactor safety and on the environmental impacts of nuclear-powered generating plants, has been named a 1985 recipient of the Enrico Fermi Award given by the US Department of Energy.

The award announcement cited his pioneering work in developing probabilistic risk assessment methods for analyzing reactor safety. His work led to a rethinking of the nature of reactor hazards and a redirection of safety research and development efforts, the DOE said.

The award, announced by Energy Secretary John S. Harrington, is the highest scientific award given by the DOE. It recognizes "exceptional and altogether outstanding scientific and technical achievement in the development, use or control of atomic energy." The award consists of a presidential citation, a gold medal and \$100,000 for each recipient.

Also receiving the Fermi Award this year was Dr. Marshall Rosenbluth, director of the Institute for Fusion Studies at the University of Texas, Austin.

Professor Rasmussen's work, the announcement said, has provided new insights and led to new developments in nuclear power plant safety.

"In the early 1970s, the US Atomic Energy Commission asked Dr. Rasmussen to head a project to examine nuclear reactor safety. The methods developed by Dr. Rasmussen for this project, completed in 1975, and the results achieved with those methods have had a profound influence on the nuclear energy field," the DOE said. "The probabilistic risk assessment (PRA) approach categorizes, on a systematic basis, the possible accident sequences for a plant. Individual sequence probabilities are then derived by adapting the fault-free analysis methods of reliability engineering. The power and usefulness of the PRA methods lie in this logical ordering of possible events and in the systematic assignment of quantitative probabilities and consequences."

Dr. Rasmussen's methods are widely used  
(continued on page 8)

## Lotus cofounder to speak at Sloan

Mitch Kapur, a founder, first president and currently chairman and chief executive officer

of Lotus Development Corporation—also an on-again, off-again and now on-again candidate

for the master's degree in management at the Sloan School—will

speak at MIT on Thursday, Nov. 14. He will

give his talk on "Organizational Issues in the Management of Innovation Using Lotus as a

Case Study" at 4:30pm in the Bowen Room,

E51-329. All members of the community are welcome.

With an associate, Kapur developed Lotus' first product, "1-2-3," spreadsheet software for IBM personal computers that is now the industry standard. After that came "Symphony," also for the IBM PC, and "Jazz," for Apple's McIntosh.

Kapur holds a BA degree from Yale University and a master's degree in psychology. He has worked in the human services field, a background he believes is important for a successful management style. From 1978 to 1981 he was an independent consultant, program author of VisiPlot and VisiTrend, product manager for Personal Software, Inc., and for one term a participant in the Sloan master's program. Currently he divides his time between directing Lotus' corporate strategy with its president and overseeing the company's research and development teams. And once again he is enrolled at Sloan.





## ← Here & There →

MIT political science professor Lincoln P. Bloomfield, an expert on global matters, has focused on a problem closer to home—the mad world of Massachusetts traffic—in a letter to *The Boston Globe*. Specifically, Professor Bloomfield called attention to the Hingham Harbor traffic circle “in the hope that maybe might be averted through timely attention to the daily stock-car follies.” As at traffic circle throughout the state, he said, drivers at the Hingham rotary routinely ignore the law that gives the right of way to cars inside the circle. He concluded in his best wry manner: “This particular circle is a kind of Beirut of vehicular traffic, but is a metaphor for the traffic situation in the commonwealth as a whole...It is fruitless to counsel reform of the Massachusetts driver, or of the enforcement authorities, whose spirit is evidently broken...I would recommend large signs at each entrance to the circle that read: ‘The law (which is not enforced) says slow down and give cars in the circle the right of way. Proceed at your own risk.’”

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MIT's Mexican students have written an open letter to the MIT community thanking it for its encouragement, help and financial support in that nation's “moment of grief.” The reference, of course, is to the earthquake that struck Mexico City and other areas in September, taking many lives and causing widespread destruction. “The MIT community's concern for our families' well-being and for Mexico City's residents in general was highly appreciated,” wrote the Association of Mexican Students in a letter to Tech Talk. “During the first days after the earthquake your moral support gave us strength and relief. Your economic support, mostly channeled through the NAFINSA (national) Reconstruction Fund and the American Red Cross is highly valuable at a time when this natural catastrophe further hinders Mexico's economic development.” The students noted that reconstruction has just begun, will take years to accomplish and will be extremely expensive. Hence, they said, contributions are still welcome. Checks can be sent to the Red Cross; to the Reconstruction Fund in care of the Mexican Consulate at One Post Office Square, Boston 02109; or to Karen Zuffante in the International Students Office (Rm. 5-106). The students said they were especially grateful to the International Students Office and to the MIT Radio Society (WIMX), whose amateur radio operators relayed messages to and from Mexico. Victor Romero, a graduate student in physics, said the Mexican student group would sponsor a lecture series on Mexico during IAP. MIT has some 48 Mexican students, 15 undergraduates and 33 graduate students.

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The two senior awards of the American Institute of Chemical Engineers will be presented to two members of the MIT Department of Chemical Engineering at the AICE annual meeting in Chicago. The Warren K. Lewis Award will be presented to Dr. James Wei, head of the department and Warren K. Lewis Professor of Chemical Engineering. The William H. Walker Award will be presented to Dr. Howard Brenner, Willard Henry Dow Professor of Chemical Engineering. The awards are named for men prominent in the history of chemical engineering as a discipline and as a course of study at MIT, which established the first chemical engineering department in 1920 with Professor Lewis as its first head. Professor Walker headed chemical engineering at MIT in its pre-department days, 1912-20. The award to Dr. Wei cites “his scholarly contributions to chemical reaction engineering literature” and “his impact as an educator.” The award to Dr. Brenner cites his “generalization of the Taylor dispersion theory to classes of transport phenomena greatly beyond its original scope” and “his novel approaches to modeling interfacial transport processes.”

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The American Society of Mechanical Engineers had elevated Dr. Robert W. Mann, Whitaker Professor of Biomedical Engineering at MIT, to fellow status. Its citation said that Professor Mann's work on human rehabilitation in the past 25 years “has helped define the field, and has developed computer programs and prostheses for the physically handicapped and has contributed to the understanding and treatment of degenerative arthritis.” Also made a fellow was an MIT alumnus, Franklin O. Carta (SB 1952 and SM 1953, aeronautical engineering), senior research engineer and supervisor in the aerodynamics group at the United Technologies Research Center in Hartford, Conn.

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Professor Yosef Sheffi of the Department of Civil Engineering received the 1985 E. Grosvenor Plowman Award from the National Council of Physical Distribution Management for his paper, “Carrier/Shipper Interactions in the Transportation Market: An Analytical Framework.” He presented the paper at the 15th annual Transportation and Logistics Educators Conference in October.

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### PRESSCLIPPINGS:

—The New York Times reports that more than 1,600 scientists and nearly 1,200 graduate students—including an unspecified number at MIT—have signed pledges to reject research work related to the federal government's plan for a space-based missile defense system. The story also quotes MIT physicists with opposing views. “The interest has been enormous,” said Dr. Aron M. Bernstein. “This thing is really catching on.” Dr. Bernstein told the Times the organizers of the campaign hope “to persuade the government to change its policy. What we're saying is, it's unrealistic. Don't ask us to do an unrealistic job.” Among the scientists who have refused to sign the pledge, saying it is impossible to know if such a system is feasible, is MIT physicist George Bekefi, said the Times. “This is an assessment that will take a decade,” he said. “This is precisely what research is all about. One has to look with an open mind.”

—Still on the same subject, MIT electrical engineering professor Jack Ruina, an expert on arms control, told a London conference, according to Reuters news agency, that any attempt to make long-range ballistic missiles obsolete “is technically an absurd idea...A perfect defense is out of the question, known by everybody except a few key political leaders.”

—An expert panel studying nuclear test verification methods—chaired by an MIT professor—has concluded that the Reagan administration used faulty assumptions when it accused the Soviet Union of violating treaty limits in its underground nuclear tests, according to the Times. The panel, chosen by the Pentagon, accordingly has recommended that the government revise its procedures for estimating the power of Soviet tests. “Our knowledge of seismological methodologies has significantly improved over the past five years,” said Thomas H. Jordan of MIT, Robert R. Shrock Professor of Earth and Planetary Sciences. The administration has argued that American experts must take direct measurements of a Soviet test to establish the accuracy of its seismic data, but Professor Jordan disagrees. “It appears to me right now that we can verify (whether tests exceed treaty limits) with existing national technical means,” he said.

—MIT ranks 11th among American universities in the number of undergraduate and graduate degrees—1,262—granted to top business executives, according to an Associated Press story on a survey conducted by Standard & Poor's Corp., the business information company. Harvard University heads the list with 5,156 degrees granted to executives. Rounding out the top five were New York University, Yale, Columbia and the University of Pennsylvania.

—The Maine Times quotes two University of Maine students—both Merit Scholars—who chose to study engineering at the state university although they had been admitted to such schools as MIT. One voiced concern about MIT's cost, and the other about its competitiveness. “MIT is the highest bill in the country,” Janie Garris told the newspaper, “and it's considered the most academic. But I was thinking of med school and I didn't want to be \$60,000 in debt when I started.” She said she never found out if MIT would have offered her financial support because she withdrew her application after being accepted. Said another student, unidentified: “I tend to get pushed under if I'm overwhelmed. I figure everyone at MIT is going to be the very, very top. I don't feel I'd do my best if I were at the bottom of the heap.”

—A syndicated Boston Globe article says a study by Harris R. Lieberman, a research scientist in the Department of Psychology, found some beneficial effects from small doses of caffeine. When two groups were asked to listen to a series of musical tones through headphones and push a button each time they heard a tone that was shorter than the others, the newspaper said, those who had been given caffeine could detect more of the short tones. “It looks as if the caffeine improved the subjects' vigilance—that is, their ability to pay attention to boring tasks for long periods,” Lieberman said.



Institute Professor Franco Modigliani had been given a significant honor this year even before he was selected as a Nobel laureate. At a recent ceremony in President Paul E. Gray's office he received the \$5,000 honorarium that accompanies the James R. Killian Jr. Faculty Achievement Award. Also present were Dr. Killian, former president, chairman and honorary chairman of MIT, and Professor Mary C. Potter, chairman of the faculty. Professor Modigliani will present two Killian lectures on April 2 and 9.

## Lincoln Advisory Board named

The appointment of a 12-member Lincoln Laboratory Advisory Board has been announced by Professor John M. Deutch, MIT provost.

Lincoln Laboratory is a center for research and development in advanced electronics with special emphasis on applications to national defense. The board members, who were appointed by President Paul E. Gray, are outstanding individuals with backgrounds in technology, national security policy and technical management.

The board will report to Professor Deutch, as does Lincoln Laboratory.

Named chairman by Dr. Gray was Norman R. Augustine, senior vice president-information systems, Martin Marietta Corp., Bethesda, Md.

Professor Deutch said that “MIT is extremely fortunate that such an outstanding group of individuals is willing to devote time to providing advice on the research program of the laboratory and its future directions. I am confident that the Advisory Board will give Lincoln Laboratory the same benefit that the campus receives from the visiting committee structure.”

Lincoln Laboratory programs include satellite communications, radar technology, optics, computer systems and digital signal processing, image processing, space surveillance and air traffic control. The laboratory is located in Lexington, Mass., about 20 miles away from the MIT campus, and has a research and support staff of about 2300 people. The laboratory director is Walter E. Morrow, professor of electrical engineering at MIT.

In a letter to board members, thanking them for accepting the appointments, Dr. Gray said: “We expect that the board will provide valuable advice as a group of outside experts to the MIT administration and the

Lincoln Laboratory management. Your participation is testimony to the high regard in which Lincoln Laboratory is held. Indeed, the laboratory is an exciting technical place which makes important contributions to the nation, and I am sure you will profit from and contribute to its efforts. We view Lincoln Laboratory as an integral part of MIT and the creation of the Advisory Board is an important step we are taking to assure the laboratory's continued technical vitality and technical contributions. I look forward to meeting with the board from time to time or at any occasion when an issue arises which you believe merits immediate attention,” Dr. Gray said.

Other members are:  
Dr. Solomon Buchsbaum, executive vice president-customer system, AT&T Bell Laboratories, Holmdel, N.J.

Dr. Esther M. Conwell, research fellow, Xerox Webster Research Center, Webster, N.Y.

Professor Sidney D. Drell, deputy director, Stanford University Linear Accelerator Center, Stanford, Cal.

Dr. William J. Perry, managing partner, H&QT Technology Partners, Menlo Park, Cal.

Dr. Percy Pierre, president, Prairie View A&M University, Prairie View, Texas.

Dr. Frank Press, president, National Academy of Sciences, Washington, D.C.

Dr. Burton Richter, director, Stanford University Linear Accelerator Center, Stanford, Cal.

Lt. Gen. Brent Scowcroft, USAF (Ret), Washington, D.C.

Dr. Jasper A. Welch, Jasper Welch Associates, Arlington, Va.

Professor George M. Whitesides, Department of Chemistry, Harvard University, Cambridge, Mass.

R. James Woolsey, Shea and Gardner, Washington, D.C.

## Psychiatrist to discuss Nazi MDs

Dr. Robert Jay Lifton, renowned psychiatrist, author and academician, will speak on “Nazi Doctors: Genocide and Moral Schizophrenia” on Friday, Nov. 15, at noon in Rm 9-150. Dr. Lifton is Distinguished Professor of Psychiatry and Psychology at The City University of New York and the Mount Sinai Medical Center.

Dr. Lifton's appearance at MIT is being sponsored by Hillel, the Religious Consultants, and the Medical Department Psychiatric Service.

Dr. Lifton had previously held the Foundations' Fund Research Professorship of Psychiatry at Yale University for more than two decades. He has been particularly interested

in the relationship between individual psychology and historical change, and in problems surrounding the extreme historical situations of our era. He has taken an active part in the formation of the new field of psychohistory.

He has written extensively on topics such as Nazi doctors and the problem of genocide; nuclear weapons and their impact on death symbolism; Hiroshima survivors; Chinese thought reform and the Chinese Cultural Revolution; psychological trends of contemporary man and woman, and the Vietnam War experience and Vietnam veterans in a variety of professional journals.

In recent years he has been developing a general psychological perspective around the paradigm of death and the continuity of life and a stress symbolization and “formative process.” Since late 1977 he has been conducting research on medical behavior in Auschwitz and Nazi doctors in general, and is preparing a manuscript entitled *From Hero to Killer—The Doctors of Auschwitz*.



## Cleveland Quartet to play here

By CLARISE E. SNYDER  
Concert Coordinator

The Cleveland String Quartet will give the first Boston performance of John Harbison's String Quartet No. 1 on Sunday, Nov. 17, at 8pm in Kresge Auditorium. Sponsored by the MIT Guest Artist Series, the concert is free and open to the public.

Harbison's first quartet is an 11-minute work in three movements written for and dedicated to the Cleveland Quartet. The piece was composed at Token Creek, Wisc., during the winter of 1984 and was premiered on October 11 at the Corcoran Gallery in Washington.

Also on the program will be Beethoven's Quartet in D, Op. 18, No. 3, and Dvorak's Quartet in F Major, Op. 96, “American.” This last piece was featured in a recent Pro Arte Records release by the quartet. Their previous recordings on the RCA label, which include the complete cycle of the Beethoven quartets, have received seven Grammy Award nominations and Best of the Year awards from Time and Stereo Review magazines.

Internationally recognized, The Cleveland

Quartet consistently receives high praise from music critics. A typical review, excerpted from *The Boston Globe*, said: “...second to none... string quartet playing doesn't come better than this.” They have appeared at the White House for a presidential inaugural concert, on local and national television, and were the first classical artists to perform on the Grammy Awards telecast.

Founded at the 1969 Marlboro Music Festival, the Quartet since has toured the world annually, presenting almost 100 concerts each year. Through the generosity of the Corcoran Gallery of Art, the quartet plays on a rare set of Stradivarius instruments formerly owned by Paganini. The quartet's members—Donald Weilerstein, violin; Peter Salaff, violin; Atar Arad, viola; Paul Katz, cello—are on the faculty of the Eastman School of Music and make their summer home at the Aspen Music Festival.









