Blacker, Ruddock Win I-House Sing Honors

The Blacker House Chorus and the Ruddock House quartet captured top vocal honors Saturday night in the fifteenth annual Interhouse Sing. The final judge's scores were 228-228 in ChE10 to Study Artificial Kidney Bio-Systems by Dave Linher

On the theory that techs should learn to apply their knowledge to practical problems, especially to problems directly related to people, there is a new course in the Chemical Engineering division. It is ChE10, and it aspires to ChE20. The specific problem to be dealt with is the application of engineering techniques to the medical problem of artificial kidneys. The course will begin with an introduction to the physiology and function of the human kidney, then it will go into the function, operation, and economics of artificial kidneys.

Student work
There will be possibilities for student work on three types of artificial kidneys: the Hill kidney, the Kolff kidney, and the Kellogg kidney. Lectures will be given by doctors from Wisconsin Veterans Administration Hospital and Bio-Systems Company, Inc., as well as the Caltech faculty. It is hoped that this course will encourage students to do work on making the machines cheaper and safer to use, since the main impediment today is not difficulty of turning out the machines, but lack of money for maintaining and operating the machines, and there are many accidents of operation which can be fatal or fatal.

Working students
As an example of what is hoped will occur, second term last year, Bill Bradley and Larry Waterland, both of Fleming House, took the predecessor to ChE10, ChE20. As a result, they became interested in the problem of air entering the blood during dialysis. Since then, they have worked on the problem, and believe that they have found a way to remove the air from the system, eliminating the problem. Perhaps more courses of this type in the future will restore the sense of purpose to the seemingly endless stream of knowledge we are subjected to.

Scientists Speak Out!

Federation To Study, Spur Social Action by Dave Lewin

Monday noon, the sedate halls of the Athenaeum sheltered a meeting with great potential for changing the role of the scientist in policy decisions. In the aftermath of nationwide series of meetings on college campuses on the misuse of technology, Herbert Meislman, a research fellow in Engineering Science, called together a group of faculty, students, and undergraduates to discuss possibilities for effective action by scientists.

The feeling of the group was that scientists can and should influence how technology is applied to modern problems, and they set out to persuade others to join them.

A fourth term, Chris Diamantoulous and Bob Spencer from Fm Trident also performed, doing a medley of Simon and Garfunkel songs. Last year's competition saw four houses competing in what Dr. Hotter called the "most vocal competition of the year." (Followed by loud hissing from the audience)

Tackle Social Problems

The Ruddock quartet trio of songs included "My Grandfather's Clock," a presentation on the futility of studying "A Sophomore Phenomenon." The group included Bob Bell, Paul Hilum, Ian King, and Terry O'Neill.

Blacker's routine was highlighted by "Dem Bones," a spiritual (?) greatly enhanced by the precision timing of the chorus and two live models (Betsy Oliver and Jan Streiff). Illustrating the anatomical principles of the song.

While the judges were deliberating, the Blacker House trio (Continued on page 5)

Resident

Associateships in the Undergraduate Student Houses

Graduate students or members of the faculty interested in applying for the position of Resident Associate in the Undergraduate Student Houses, for the academic year 1969-70, should contact the Master of Student Houses in March 21, 1969. There may be one or two positions available for married couples (without children).

For further information, call at the office of the Master of Student Houses, Blacker House, or phone ext. 2195.

Richard H. Stanford, Acting Master of Student Houses

Staff Wanted

If you have ideas and the desire to work on them or a desire to work on interesting ideas of others, and would like some of the leverage required to implement them, you should consider joining the ASCIT Presidential Staff. You would find yourself with some responsibility and virtually absolute authority over the programs with which you work. Only a limited number will be accepted. If you are interested, mail a note to the office in Wis- nett.
Veep Speaks Out

Honors System Changes Proposed

by John F. Healy

The role of the honor system and ASCIT at Caltech are complex subjects. No student realizes this more than Pete Schroeder, vice president of ASCIT and head of the BOC.

The BOC’s major problem is honor system violations. As far as Pete knows, no one has ever been expelled from Caltech for this reason. The major areas of concern are academic, especially the food service, and student rooms, especially the ECE stock boxes. Very rarely does anything get reported from the food service, since it’s usually considered administratively a problem between the manager and students. If off-campus members come in and take food, they’re violating the honor system in the sense that they’re stealing part of the Institute.

The problem with the ECE stock room is that it contains supplies, about $10,000 to $20,000 in value, and students need these supplies for their work on the aforementioned proposal on independent study. If your answers were “No,” “No!” and “Not!” you are as well informed as most people at the Institute. Academics is presupposed that you’re reasonable to their reasonings about being here. We always receive a request to warn about minorities in this sphere.

Most of the Committee’s time has been absorbed this year by the Glee Club. Here, the most important thing is that the individual involved be willing to work; that is, have the right to work, and that their voices be heard. The most people who are aware of what can be expected are those who want to improve the place.

In order to make this work, we need information on which committees are doing what. A recent YMCAs-sponsored meeting provided some (besides motivating us to start this column), but there are many groups involved in different ways. If you are currently working on something of this nature, please contact Mark Jackson (Bru), Mike Kahn (Rui), or George Waller (off campus—Rui).

The group which is important to the point of view of the student body is the Academic Reform Committee. Created by ASCIT last year as a long-term successor to the Academic Reform Board (and how many of you remember them?), the ARC is charged with studying proposed changes in academic policy.

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The most important thing is that the individual involved be willing to work; the ARC has only six members and is strapped for time. Here, then, is a mechanism by which the students can make their voice be heard. The most people who are aware of what can be expected are those who want to improve the place.

Interhouse Sing

(Continued from page 1)

of Dick Nen, Ken Kamin, and Craig McCluskey entertained the audience with a Renaissance festival theme. They started off the program with a song of a girl’s learning such archaic musical forms as the Renaissance notation (a dotted note) and to “shirk” (will). The permutations available from these two aroused the audience to understand the lyrics.

The Glee Club rounded out the program by demonstrating the power of male voices. At the conclusion of the award ceremonies, Oaf Poolman, chairman of the Interhouse Sing, led the whole audience in the Caltech alma mater.

Toying With Tradition

Charging that the honor system is “playing with a tradition,” and this tradition is what makes it work. “On academic matters it’s very easy to justify what the board of control is doing,” he said. “It’s a good philosophy behind it. And there’s sort of a moral commitment involved in the honor system. But I think it’s a very easy to justify what the board of control is doing,” he said. “It’s a good philosophy behind it. And there’s sort of a moral commitment involved in the honor system. But there is no moral commitment on the part of the students that they should not cheat or steal. And there is no moral commitment on the part of the students that they should not cheat or steal.

What do you do if somebody like this happens in the future?

“I’ll try to get to an experiment to see if the honor system is better or worse.”

Pete believes ASCIT should take new directions: “Any organization that has any old pat­ terns is dead, but taking new directions doesn’t mean that it should drop everything that’s happened in the past.” The search project on the honor system is fine for those who participate, and he realizes that he won’t get any more than he thought it should be. But that’s what you can expect, and it’s what you will expect ten years from now. But that’s what you can expect, and it’s what you will expect ten years from now.

Blocks of Girls

He has some specific things he thinks ASCIT should consider. Girls shouldn’t live a black-and-white school. Women were going to admit in 1970, but this has been postponed a year because the honor system didn’t work. The Honor system is very easy to justify what the board of control is doing.”

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MATH TUTORING HELP WANTED

Middle-aged male doctoral candidates needs patient tutor qualified in any or all of the following fields: Differential-Integral Calculus; Matrix Algebra; Linear Programming; Game Theory; Computer Textistics: Bayesian Decision Theory; and Probability Theory. Write briefly summarizing qualifications, hourly rate, evening availability. Address "Tutor", 2190 Courtland Ave., San Marino, 91108.
For Tired Seniors...

by Nick Smith

Those few of you who go to lectures in 22 Gates and Dabney, there sits a verdant field in the middle of the campus were men, and giants walked the bench. This is by no means the bench! Known as THE SENIOR BENCH.

Back in the days when men were men, and giants walked the earth; long before the lush and verdant fields in the middle of campus were torn out for a library, there was a tradition of THE SENIOR BENCH.

For years this proud piece of furniture has been a resting place for the work-weary seniors of each year's senior class. By the extent of not being in the Senior Oak tree mentioned above, and mentioned thusly in the Little t:

"With Yourself"

used by most experts, the Big Club requires only seventeen points, which will force the bidding low on strong hands and limits other suit openings to minimum hands. The Big Club shapes the entire Schenken structure, defining the bidding of many other bids. For example, a raise of an opening to the three level, or a two over two raise of no trump, to a non-club opening is a clear indication that the hands are minimum.

Much of the inspiration for Schenken's system comes from the repeated drawings he has received at the hands of the Italians in World Championship play. Schenken played on four North American teams in the early nineteen fifties, when American bridge was the strongest in the world. All four teams, using Standard American bidding, easily defeated their opposition. Since 1955 however, the United States has finished second in every World Championship. Schenken played on three of those teams, using standard bidding in 1955, but playing the Big Club in 1963 and 1964. Twice he played the Big Club, Schenken's system was severely beaten against the World American Italian Blue Team.

Are you stranded at Tech over the break? Tired of snaking? Want to try the Music Civic Band, the Ash Grove, the L.A. Times' Amusement Section, or FM and Fine Arts for times when you're feeling culturally deprived? Check the L'A Times' Amusement Summary for times and shows and don't cost that much. For years this proud piece of furniture has been an exclusive resting place for the work-weary seniors of each year's senior class. By the extent of not being in the Senior Oak tree mentioned above, and mentioned thusly in the Little t:

"For tired seniors..."

What to Do With Yourself

by Bill Bradley

Are you stranded at Tech over the break? Tired of making What to try something new? If you're feeling culturally deprived, try the Music Center. If you're feeling morally deprived, see HAIR--there's a rumor that it'll be closing down at the end of March. If HAIR isn't enough for you, go to the ranch flics. If that didn't work, see your UCC--he'll tell you what to do. If you're the clean-cut type, who groove folk music, try the Ash Grove, the Troubadour, or our own Pasadena Ice House. They generally have good shows and don't cost that much. If you happen to be a jazz freak, Brubeck is at the L'A Times' Amusement Summary for times and places. You might check out the slick guide while you're looking at the paper. Who knows -- maybe you'll find a good one, like the "Killing of Sliger George" or "Bashed Racket," that's so obscure the old standards -- Disneyland, Knott's Berry Farm, the TV or movie stars -- still hold if you have some head to snow. If you want to go to Disneyland, see Personnel (213) flour Throgg) for discount cards.

If the weather is too cold for Disneyland it may be just right for skiing. There are some reasonable runs within two hours of Tech. If you don't have any equipment, a full day of skiing will probably cost you $15.

"Fourth?"

by Robert Geller

North

S A K 7 4 3

H 9 3

D Ak 5 2

West

S 9 6 2

Q 8 4

H 7

T 10 6 2

D S 5

E 3 K Q 7 4 3

C J 8 0 5

South

S K 10

H A K Q 8 7 6 5

D J 8 4

East

West

Vulnerable

The bidding

South

North

Kebeda

Murray

4 H

5 D

6 D

Pass

D'Allelio, Palaci Tidic

4 D

5 D

6 H

Pass

West led the king of clubs.

Although he was one of the inventors of standard bidding methods, Howard Schenken has been on the warpath against Standard American for some time. In his last book, Howard Schenken's Big Club (Simon and Schuster, $16.50) Schenken gives two different versions of his Big Club system, one which simply grants a strong one club opening onto Standard American bidding, the other being a complete summary of the system he plays with his expert partners. Schenken's system has been proven in practice.

The basis of both Schenken systems is the strong artificial one club opening, with the negative one diamond response. Unlike the strong one club opening used by most experts, the Big Club requires only seventeen points, which will force the bidding low on strong hands and limits other suit openings to minimum hands. The Big Club shapes the entire Schenken structure, defining the bidding of many other bids. For example, a raise of an opening to the three level, or a two over two raise of no trump, to a non-club opening is a clear indication that the hands are minimum.

Much of the inspiration for Schenken's system comes from the repeated drawings he has received at the hands of the Italians in World Championship play. Schenken played on four North American teams in the early nineteen fifties, when American bridge was the strongest in the world. All four teams, using Standard American bidding, easily defeated their opposition. Since 1955 however, the United States has finished second in every World Championship. Schenken played on three of those teams, using standard bidding in 1955, but playing the Big Club in 1963 and 1964. Twice he played the Big Club, Schenken's system was severely beaten against the World American Italian Blue Team.

All the tricks

Today's hand, taken from the 1967 World Championship, illustrates the difference between American and Italian styles of bidding. Both pairs had identical auctious up to North's six heart bid. At this point Kebeda passed and D'Allelio gamboled by bidding seven hearts. There is an excellent play for seven hearts, since even against a diamond lead, declarer has the chance of a throw. The key to the trick, a doubleton queen of diamonds, or a singleton dummy; West. Neither declarer had any difficulty making seven after the club lead, since "when a club dummy is ruff­ing out the spades. The Italians won ten imps for their gamble.

Schenken, a member of the World Championship's greatest players and theorists; his system and book are accurate reflection of his standing. No bridge player should miss this book.
Scolovitz Changes Tech

"Here we have a really strange philosophic philosophy about the whole of society. They are confidential in the sense that faculty members may not look at them, except they are told how their own course came about, and they themselves came out — which is ridiculous. We are protecting the faculty from some other faculty member knowing that he is a crummy philosopher. That's not realistic! If he is, he ought to be concerned about getting something right." There are bi-weekly seminars (open to all) being conducted by the faculty committee on undergraduate student organizations to examine teaching techniques at Caltech. There have been discussions of specific courses. This is a good place to air gripes.

Laudon, Jason

"ASCIT must lead even if students don't follow," says Pete. "Ideally ASCIT should represent the student body, but I think anybody who recognizes that at Caltech the student body is not particularly inclined on what's going on. It is not particularly interested in changing anything or in looking into the quality of its other officers. This is a unique Caltech problem?"

Perhaps it would be worthwhile to talk to him. "What ASCIT has to do is to look for any ideas at all that come out of the student body and try to work on these. I feel that we feel an obligation to lead. I expect that some of the ideas that I might come up with will be useful enough or popular enough that people will want to do them, but I have to try."'

Orchestras Not Too Many Cooks

For Gabrieli

by Paul Levin

The Virtuoso Brass of Three Great Orchestras: Performing the Antiphonal Music of Gabrieli. Columbia M 7205.

It has been said that too many cooks spoil the broth, but as this recording shows, too many musicians don't spoil the music. This recording of Gabrieli's music was made by the brass ensembles of the Chicago, Cleveland, and Philadelphia Symphony Orchestras, and while the performance time is not divided equally among the groups or among the players, it is still safe to state that this is a three-way project.

Gabrieli, a late sixteenth- and early seventeenth-century composer, wrote mainly polyphonic music. Baroque is a great boon to this type of music as it allows the listener to hear music as it is actually performed: with two separated groups answering each other; in conjunction with this the record jacket lists for every individual number the channel (left, center, or right) on which every performance is heard. The music is performed by brass instruments entirely, though I have on other occasions heard it performed with organ as well as brass. I like this organ arrangement much better as it produces a fuller tone without detracting from the brass. In all, for a person who appreciates polyphonic music this would be a very good buy.

Irregulars Play Saigon, Fleming

by Alan Lederman

Imagine a folk group less pretentious than Simon and Garfunkel, less naive than Peter, Paul, and Mary, and less adolescent than Sparky and Our Gang. Then you have the Baker Street Irregulars, appearing in a Fleming House concert. The Irregulars are a relatively young group, having been taken together only one year. Formed in Miami, the group then traveled to such exotic places as Saigon and Da Nang. Said Barbers Smith, female vocalist in the group: "We were booked into Service Clubs; the guys there only want to hear rock'n'roll that was five years old; we found that just a drag. We were booked for six months and left after two weeks; but I guess you can’t blame the soldiers." Her husband, Mike Smith, writes about ninety per cent of the group's material. Most of that presented Friday was very good rock, with not quite enough content to make it a serious folk concert, but with enough spirit and attitude to make it an enjoyable evening. The group suffers from a lack of professionalism, which I think could be overcome in a matter of a few months. The Baker Street Irregulars will present a concert at Beckman Auditorium third term; it should be a worthwhile event. For those who would like to see the Irregulars sooner, they will be appearing at the Ice House starting April 8.

Pope

Those of us in the international Tech set then proceeded to Beckman. For les etudant de Caltech who cannot parle français, there was a most uncomfortable evening en nuit. La Comédie de Bourgogne, which claims that it is "the INITIATOR of unique and TRULY ORIGINAL dramatic research," presented the play "Pédro," which was written in each recent times as 1677 by Racine, who basically used it as a work by Euripides written in 498 B.C. (not quite contemporarily.) Moreover, the play was presented in rapid-fire French. The program notes were as incomplete as possible, so that the total effect was to alienate anyone who was not proficient in the language, including almost all C.I.T. undergraduates. One can only say, that nothing was lost in the translation.

Fisher New YMCA Prexy

Bob Fisher is the new president of the Caltech YMCA. He was elected at the Y elections, by the students, faculty, and Campus Staff. Among the other officers elected were: Ben Barker, Treasurer; John Bean, President; Bob Fisher is the new President; Stein, Secretary. These were elected at the Y elections, and Dave Lewin, Treasurer; John Bean, President, RATES $7.00.

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Sports

Racquetees Improve

by Coach Lamb

The Caltech team has achieved a season record of three wins and six losses as they go into the Loyola match. The squad has played with wonderful spirit and have had two close losses: one against Amos-Pacifica 5-4 and another against Cal Lutheran 6-3. A win in either one plus an expected win against Loyola would have given them a 500 season.

Ken Fishel, at number one, is improving with each match and could tip the scales in our favor. Fly with a 2:06.9, and barely was diving events.

Greg Evans has run into strong (795-8361) scored in the 100 Free. 35, and Redlands 62 to 51, to finish the season.

Improve with each match and could tip the scales in our favor. Fly with a 2:06.9, and barely was diving events.

Swimmers Take Third in Meet

by Coach Beck

Coming off a solid third place in the SCIAC meet last Friday at Claremont, Caltech's ever-improving swimming team is now pointing for the National Association of Intercollegiate Athletics (NAIA) Championships March 25-27 at George Williams College, near Chicago, III.

I was well pleased with the swimmers as they showed up with 233 points on the final day.

Caltech was the only conference team to win any events from SCIAC champion Claremont-Mudd (CHM) as Capt. Greg Wright won the 200 Backstroke in a time of 2:12.3 and Mabry Tyson pulled the upset of the day in the 200 Breast, by defeating defending champion and previously undefeated Karl Graeber, Caltech Divers.

Other Caltech swimmers who scored points in the championship were Tim Hight in the 200 Free, 100 Free and 400 Freestyle relay which he anchored with his best 100 of the year, 51.8; Tom Davis in the 200 Free, 200 Fly, and 200 Breast; Ed Michowicz in the 100 Free, 50 Free, and 500 Free; Tom Coates in the 100 Free, 50 Free, and 400 Freestyle relay; Larry Watkins in the 100 Free and 400 Free Relay, Robert Hall in the 200 Individual Medley, 200 Fly and 200 Breast; Mike Stefanou in the 100 Medley Relay, and 200 Breast. Senior Larry Hunt had his best 200 Breast of his career as he bested with a 2:31.5.

Tom Miller teamed with first year swimmers Tom Wells and Richard Hjelle to get a 4th place in the Medley Relay.

Caltech Divers Steve Johnson, Gary Neely, Arnie Richards and Allan Harsein placed well in both the 3 meter and 1 meter diving events.

In its last 4 meets before the championship Caltech defeated PCU 77 to 36, Cal Poly Pomona 94 to 49, Mt. San Antonio 38 to 55, and Redlands 62 to 51, to finish the season with an 8 and 5 record.

This year's Caltech team is one of the best in the school's history and has taken or will take practically every record except for NAIA champ Henry De Witt's sprint records in the 50 and 100.

Next Wednesday, All-Americans Greg Wright, Mabry Tyson, Steve Shefield and I will leave for the NAIA championships with hope of winning the 400 yr. Medley Relay and basically ahead of archival Occidental.

Beagle Takes 6th in Meet

At SCIAC Tourney

Alan Beagle attended the NAIA National wrestling Tournament and took sixth in the 190-lb. class. He won his first three matches and then lost to the eventual second place winner, Dr. He lost his next two matches and took sixth. Beagle gained 7 points for Caltech as 31st out of 70 competing schools.

Fisher of Biola who was second in the 177-lb. class and gained 14 points contributed to Beagle to give the NAIA District 3 their 23 points. Coach Gutman commented, "He is Caltech's and SCIAC's best wrestler. He needs more experience against good wrestlers and if he had this, he would have taken at least second place."
"I was skeptical about IBM as a place for mechanical engineers," says Dick Driscoll. Dick earned his B.S.M.E. in 1967. He's now a manufacturing engineer at IBM. "But I was wrong about IBM," he says. "There are plenty of opportunities for M.E.'s in just about all areas, especially in development and manufacturing."

Dick chose manufacturing engineering when he joined IBM because he was interested in producing core planes for memory components. He says, "After the component has been designed, I coordinate the tooling and all the other manufacturing processes. I initiate basic ideas on the design of tooling and work closely with the people who design and build the machine tools and install the production machinery. "It's sort of like solving a very difficult three-dimensional jigsaw puzzle," he says. "And it's a 'pure' engineering job. The kind I was trained for. Because, in the final analysis, responsibility for manufacturing the memory component rests with the mechanical engineer."

Interdisciplinary environment
Dick's job exposes him to a lot of different disciplines: electronics and chemistry, for example. He finds that the diversity helps him keep up to date technologically. "It gives you a chance to learn what's new in other fields that affect your specialty," Dick says.

Check with your placement office
If you're interested in the opportunities for mechanical engineers at IBM, ask your placement office for more information. Or send a resume or letter to Harley Thronson, IBM Corp., Dept. C, 3424 Wilshire Blvd., Los Angeles, Calif. 90005. We'd like to hear from you even if you're headed for military service.

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"I used to think IBM would be one of the last places for an M.E."