

**VOLUME LXXXIX NUMBER 1** 

PASADENA, CALIFORNIA

FRIDAY 25 SEPTEMBER 1987

# Welcome To Caltech, Frosh

#### by Christina Garden

Lasciate

Welcome all newly arrived freshmen and transfer students to Caltech! Undoubtedly, your arrival at the finest and most high-powered science and engineering institution in the world will be the cause of many new changes in your lifestyle. These changes-new freedoms, new friendships, new experiences-will contribute to your growth as a person, as well as engender new stresses.

Not to worry. The workload will likely not be too heavy for the first couple of weeks, and the people of the greater Caltech area are known for their strong community spirit. In any case, your presence at Caltech exposes you to a world of opportunities not available to normal people (we're ultranormal people, by the way). First there is Frosh Camp: three days of fun in the sun under the guise of orientation. Rotation follows and, despite its shortcomings, it can be looked upon as a week long party. Caltech

is a special and unique place, so take advantage of these opportunities! Here is a chance for you to meet complete strangers for no reason other than mutual curiosity and friendliness under no unnatural social prerequisites and other complications. You will find that Techers share many interests and activities, yet their personalities are more diverse than one would expect. The backdrop of varied personalities provide an excellent opportunity for introspection. These opportunities disappear as close friendships develop and potential friendships fade away. Of course, many other opportunities-social, academic, spiritual, etc. - will present themselves in the years to come. Appropriately, these opportunities should also be taken advantage of.

In any case, now you should relax, meet people, and adjust yourself to life at Caltech. Take the time to get to know the Pasadena areaboth its people and its places. And eat your vegetables and get to bed by eleven.

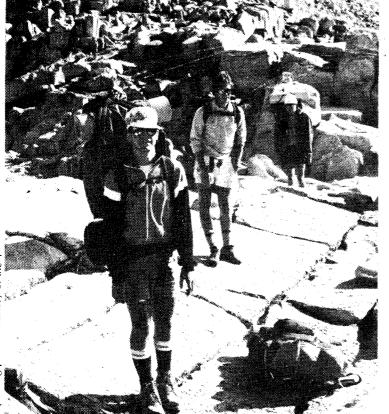


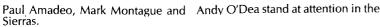
The Coffeehouse Users Group pose for a photo.



Allen Knutson prepares to cross a rocky promenade.

# Y's Backpack Trip







Two backpackers commune with nature,

## by Joe Beckenbach

The Caltech Y began its yearly activities with its traditional Backpacking Trip. This year's hike took a total of fifty students and staff members into John Muir National Wilderness for five nights, from Tuesday, 15 September, until Sunday afternoon, 20 September.

Two strenuous and two intermediate groups travelled in opposite directions on two trails while the fifth group took day hikes out of a base camp part-way into the wilderness on a third trail. Each group filled two rented vans and carried their own food and shelter and filtered water from the streams and lakes near their campsites.

The "mellow" group spent its first night with Bibi Jentoft-Nilsen's intermediate group at Tour Jeffries Campground west of Bishop. After short drive and two days of hiking.

After a short drive and two days of hiking, the mellow group set up camp by George Lade. Here the four upperclassmen and five freshmen staved, sallying around the lake and across the Table Mountain. As usual for the Y hiking trip the tasks of building evening campfires, filtering water, and constructing make-shift rafts fostered camaraderie and introduced new Techers to the old.

The only problems this year happened with the group on the strenuous hike that Seth Jelen led. No broken bones...just a flat tire after a side trip to see the Giant Sequoias.

A support group for the students at the Institute, the Caltech Y brings special events to campus. Some Y activities include movies, rental of backpacking gear, discounted tickets to some events in. Los Angeles, and Decompression during finals' week. Stop by the office upstairs in Winnett to get more information or to offer your help.

## FRIDAY 25 SEPTEMBER 1987

Faculty photos courtesy of Public Relations (Barbara Wirick) and Graphic Arts

# Best Teachers at Tech

[CNB]-Six members of the Caltech faculty have received awards for teaching excellence from ASCIT. Selections were made by the Educational Policies Committee on the basis of student evaluations of courses taught during the academic year. The professors are evaluated on clarity. enthusiasm, command of the subject, rapport with the class, and interest in the students as individuals.

Commenting on the ASCIT awards, Caltech provost and vice president Barclay Kamb said, "There is no greater tribute a faculty member can receive than the approval and commendation of our most demanding critics-the undergraduate students."

The six faculty members honored by ASCIT are:

Donald Cohen, professor of applied mathematics, for the course "Introductory Methods of Applied Mathematics.'

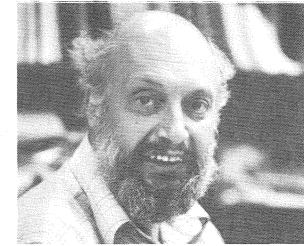
Dennis Dougherty, associate professor of chemistry, for the course "The Chemistry of Covalent Compounds.'

Valentina Lindholm, lecturer in Russian, for the course "Elementary Russian.

Thomas Prince, associate professor of physics, for the course Waves, Quantum Mechanics, and Statistical Physics.'

Jean-Paul Revel, professor of biology, for the course "Introductory Topics in Biology."

Thomas Tombrello, professor of physics, for the course "Quantum Physics."



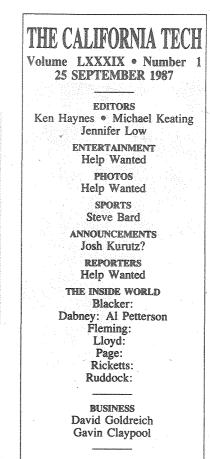
Jean-Paul Revel, professor of biology



Valentina Lindholm, lecturer in Russian



Tom Tombrello, professor of physics

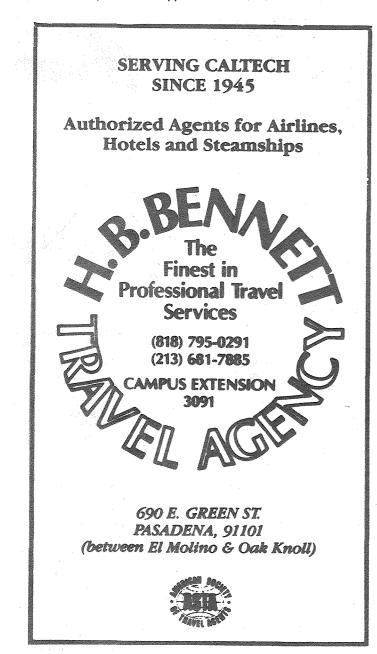


PRODUCTION Nick Smith

THE CALIFORNIA TECH 107-51 Winnett Student Center California Institute of Technology

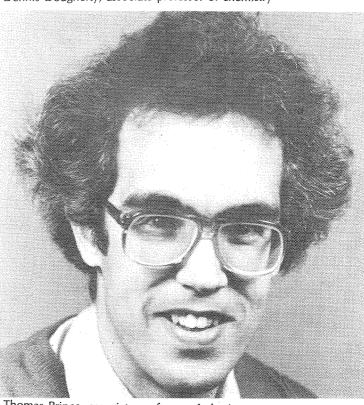


Donald Cohen, professor of applied mathematics





Dennis Dougherty, associate professor of chemistry

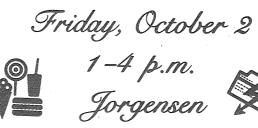


Thomas Prince, associate professor of physics

# **OPEN HOUSE**



B



See the latest in PC hardware and software

The Campus Computing Organization

Pasadena, California 91125

Phone: [818] 356-6154

Published weekly except during examination and vacation periods by the Associated Students of the California Institute of Technology, Inc. The opinions expressed herein are strictly those of the authors.

Letters and announcements are welcome. All contributions should include the author's name and phone number and the intended date of publication. The Editors reserve the right to abridge and edit letters for expediency, literacy, or other.

Turn in copy (preferably on an IBM-compatible, WordStar-formatted floppy disk) to the *Tech* office mailbox, room 107 Winnett. The deadline for copy is Wednesday at 5PM; for announcements, Tuesday at 5PM. Late copy may not be printed even if prior arrangements have been made with the editors.

Subscription requests should be directed to the business manager. Rates are \$3.00 per term, \$8.00 per annum (three terms), \$100 per life. Printed by News-Type Service, Glendale, California

ISSN 0008-1582

NOBODY

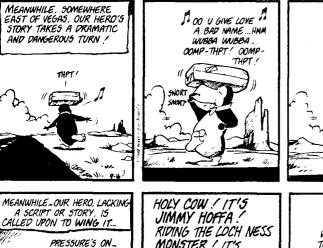
GAVE ME

00K !!

continued on page 4

**'**01]

RNE57



THEY'RE GONNA

VOID MY IDEA ... T

KNOW IT ... LESSEE ..





County

# Bloom

"OPUS IS THUMBING OUTSIDE OF VEGAS. SUDDENLY A CAR DRIVEN BY HOWWW-DEE ! YEW KIN FINALLY THEY GIVE ME A SCRIPT. WHERE ARE WE ? SIT NEXT **THIS** 15 SCREECH. ELVIRA A CRIMINAL WHAT HERE -AH. HERE WE GO .. SOCIOPATH HAPPENS SCREECHES UP. OPUS HOPS IN ....? WHEN I MISS ONE STORY CONFERENCE I'M 50 HAPPY. I'M DRIVING TO VEGAS WITH THE BANNO PLAYER WHAT THIS SCRIPT NEEDS NOW WE'RE 15 A QUICK COOKIN FROM \*DELIVERANCE REWRITE ERASE ERASE ERASE AND HIS PET SLEDGE 000 000 HAMMER

To: College Students Cash From: Circuit City For

# FRIDAY 25 SEPTEMBER 1987

# The Inside World

**Dabney:** Ten frosh wandered in. They looked at the walls and wondered. They saw the long hair, the bare feet, and wondered. They saw the darbs sitting in their "playpen" couches, in their hot tub, on their floors, sometime sleeping there, and wondered. Tehy observed, because they were looking for it, the water-pipe in the corner, the different attitudes, the different lifestyles, the difference. That's all they saw.

Ten frosh wandered out. They explored the other houses. They listened attentively to the north-house upperclassman, to the rumours spread by those who "know," che sanno. They learned all the things that are said about the smallest house; they heard about the drugs, the weird shit, the decadence, the difference.

Then nine frosh made their decision

The tenth frosh wandered back in. The tenth frosh talked to a Darb.

-Al Petterson

# **Coffehouse Gasconade**

Below is a "slice of life" conversation with the Coffeehouse Managers. The names and places in the Student Activities Center are real. The conversation has been changed to persecute the innocent. Read carefully and learn what really goes on during the off-hours of the Coffeehouse.

The Coffeehouse, one sunny afternoon, Coffeehouse Manager's meeting.

Earl: Hey guys, sorry I'm late. I got lost looking around. Isn't this new basement rad?

Barry: Heh, heh. Yeah, I got lost, too.

Steve: It's not that difficult, guys. It's the square around the courtyard, then some hallways that form an "E" on the west side.

Earl: Hm. Never thought about it that way.

Barry: Anyway, we've got work to do.

Steve: Let's head out to the courtyard. It's a nice day and I like the furniture.

Earl, Barry: (Hems and hahs of agreement).

They settle in surrounded by sounds of birds chirping, workmen banging and air hockey careening in the picturesque Red Square.

Barry: We need garbage cans. I want to get some nice garbage cans that go nicely with the architecture.

Earl: How big?

Barry: Nice little cute ones. Earl: Nah, we need big ones. Steve: Yeah. Huge, hulking, nuclear waste rated garbage cans. And some industrial strength liners.

Barry: No! I want cute garbage cans! By the way, what color liners?

Earl: Barry, you're such a yuppie.

Barry: So?

Steve: Anyway, we'll come back to this. What about FOOD?

Barry: What about it?

Steve: What's hot? Barry: The fajitas are selling

like wildfire.

Earl: And I'm happy with the shakes. Most of the are passing the "Test".

Steve: What "Test"?

Earl: The inversion test. You take a shake and turn it upsidedown and if it doesn't move it passes the test.

Barry: Awesome!

Michael Keating (from the Tech office): Hi guys, what's up?

Steve: Just a meeting for the Coffeehouse.

Michael: Kin I git a shake? Y'all are just sittin' around when you could be serving a payin' customer.

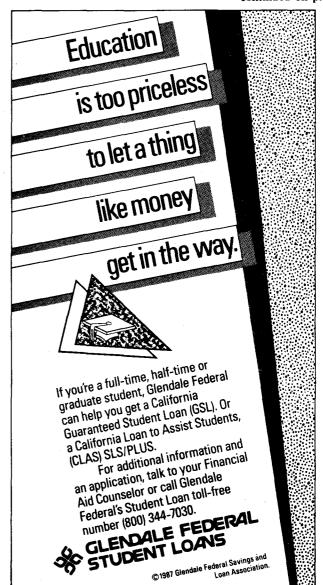
Earl: Sorry, Mike. We don't open 'til eight.

Michael: Oh. See ya later.

Earl, Steve, Barry: (Various parting yells)

Nancy, the Student Activities Coordinator (*entering the courtyard*): Hi Guys. Did you notice that our Aphrodite shipment is in?

continued on page 4





Circuit City is the billion dollar retailer of brand name audio, video, car stereo and major appliances. As we approach our busiest time of the year, we're looking for FULL and PART-TIME seasonal help.

Students love our holiday employment opportunities because we offer:

- · Full and part-time openings to fit your schedule
- · Great salaries to help pay your college expenses
- · An opportunity for advancement within our expanding retail organization

### NOW HIRING FOR THE FOLLOWING SEASONAL OPENINGS

- Audio/Video/Car Stereo Sales Counselors
- Car Stereo Installers
- Warehouse

Credit Clerks

- Cashiers
- ReceptionistsCustomer Service Clerks

There's a great employment opportunity just waiting for you at Circuit City.

Apply in person on October 3-10 (except Sunday) from 9am-6pm at the Circuit City Hiring Center at Best Western's Westerner Inn, 161 Colorado Place in Arcadia.

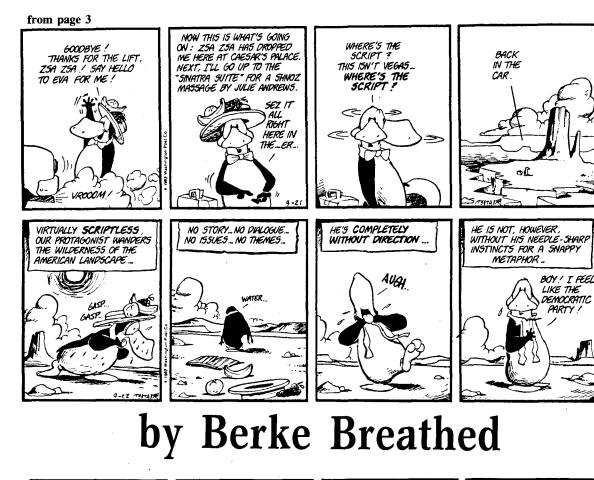


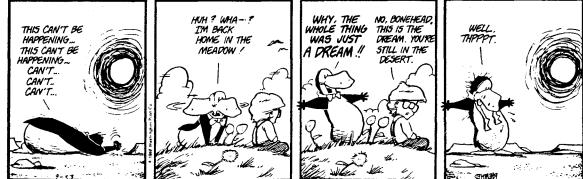
### 39 N. Rosemead Pasadena, California

Equal Opportunity Employer

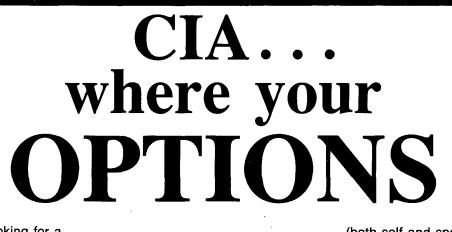
# 4the california tech

## FRIDAY 25 SEPTEMBER 1987





continued on page 9



If you're looking for a professional environment that will expand your options, not limit them, you should consider a career with the Central Intelligence Agency.

are as diverse as your interests (both self and spouse), and successfully meet our strict medical and security requirements.

The CIA offers highly competitive compensation, liberal benefits, and the



"Knowledge is of two kinds. We know a subject ourselves, or we know where we can find information upon it."

Boswell, Life of Johnson (1775)

You can find a wealth of information from the Federal Government at Depository Libraries. Contact your local library.

# Gasconade

from page 3

Earl: You mean that heavenly cheesecake and that absolutely sinful pie?

Nancy: Yeah!

Earl: I didn't notice. (angelic grin)

Steve: Me neither.

Barry: But we will (*evil grin*). Heh, heh, heh.

Nancy: (chuckle) OK. I'll see you guys later.

Earl: Hey guys, we also need waiters for the school year.

Barry: Oh. Yeah we do. Steve: How many do we have? Earl: Not enough. We need at least fourteen. I would like to have twenty-eight so we can split the shift in half.

Barry: Sounds good.

Steve: Let's put something in

the Tech to get people interested in waiting.

Earl: Good idee.

Barry: What about the grand Opening? Earl: It's October 9th.

Steve: It's going to be a total blowout!

Barry: Sort of like the Blue Nova table.

Earl, Steve, Barry: (Loud explosions of mirth).

Steve: Well guys, I'll be getting along to work on the ad for the Tech.

Earl, Barry: (More parting yells).

Earl: Hey Barry, why don't we go watch a movie on the big screen TV?

Barry: Yeah. Plop down on all those pillows, watch Star Wars on a 46" screen with those two extra speakers. Wraparound sound-Ahhhh.

Earl: Well, let's do it!

We seek enthusiastic engineering majors who are interested in international affairs as well as the interplay of politics, history and economics in the affairs of mankind and nations...individuals who will make the most of their talents in a wide variety of challenging CIA positions.

An entire spectrum of opportunities is yours to explore ... opportunities as diverse as your own interests, as exciting as your curiosity. And all our career options come

with the intellectual stimulations and excellent growth potential you need for a rewarding professional life. To qualify for a CIA career, you must have a Bachelor's or Master's degree or a PhD, be a U.S. citizen



**Central Intelligence Agency** 

The CIA is an Equal Opportunity Employer

consistent challenges inherent in a diverse environment. In addition, our location just outside the Washington, D.C. area provides you with an abundance of leisure-time options such as cultural events, athletic bouts, and historic attractions.

Literature is available for review at your Career Development Center.

To explore your options with the CIA, send your resume to:

Personnel Representative C21 P.O. Box 3127 South El Monte, CA 91733

Resumes must be received by 9 October 1987 for Fall interviews.

# **ENTREPRENEURS**

Plan on being one?

Working with one as a professional?

The Los Angeles Entrepreneurship Academy is looking for high-potential students, graduate or undergraduate, any major, to participate in a two-semester program that will include:

- meetings with successful local entrepreneurs
- hands-on experience and internships
- inside looks at local industries
- training and experience in networking, goal setting, and sales

The academy is a non-profit organization founded and administered by over 35 Los Angeles business and community leaders.

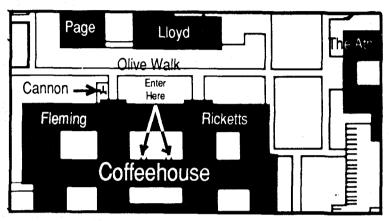
For more information, call Maureen Ford at: (213) 590-8011.

# **THE CALTECH OFFEEHOUSE IS BACK!**

The Coffeehouse is back in a *BIG* way. All you folks who enjoyed the old Coffeehouse will find that your favorite place to eat is better than ever, with a spankingnew kitchen and dining area. Across *Rad Red Square* is the Game Room with some of the best video games and pinball machines around, plus <u>Air Hockey</u>. Come sprawl across the ocean of pillows in our new TV room with VCR, videodisc player and big movie selection.

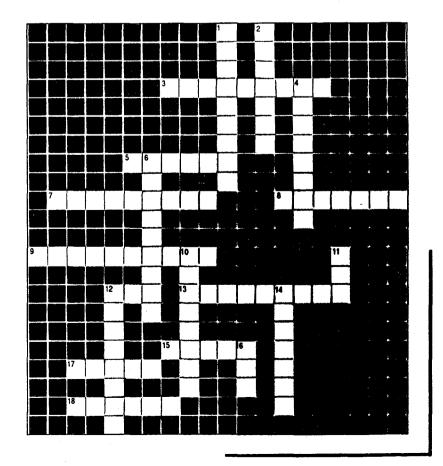
All you new Techers will learn that there is no better way to relax during a night's study than to chow down on a Joe burger, a pile of fries, and a shake that won't hit the floor even if you turn it upside-down. Try out the crossword puzzle. It's nothing fancy and it's something fun to do in your spare time (or on a boat ride, Frosh). All the words have something to do with the Coffeehouse. Then bring it on down and get a 10% discount on your order. It's all located in the new Student Activities Center. Hours: 8pm-1am, Monday through Sunday. Special Rotation hours: 10pm-1am.

# ΜΑΡ



## Across

- 3 Fizz from the Big Apple
- 5 Appetizer with cheese
- 7 It passes the test
- 8 Ace submarine marksman
- 9 Deluxe ice cream
- 12 Well-known sandwich with bacon
- 13 Caterpillar has fewer legs
- 15 Occupies room directly East of the Coffeehouse
- 17 Heavy noble gas of a game
- 18 These you watch on 15 across



DOWI

1 Visual CD player

2 You can get our cold drinks from the tap, cans, or -----

4 A tea like one of the managers on a dusty day 6 A greek goddess who inspires desire, as do our desserts

10 Deep fried mushrooms, deep fried cheese sticks, and deep fried ------

11 The ultimate burger – a triple chili cheese baconburger

12 Hot star explosion

14 Ultimate example of pinball 16 Movie-watching device

FRIDAY 25 SEPTEMBER 1987

# Rotation

# Freshman

• • •	Sun	Mon	Τυε	WED	Тни	FRI	SAT		Sun	Mon	TUE	WED	Тни	Fri	· SAT	
OLIVER ROBERT	Bl	LI	ða	Pa	Ri	FL	Ru	GASS JOHN H	Ru	Pa	FL	Ri	BI	Lì	ða	
· · · ·								GERAGHTY DAVID F	Pa	Ll	Ru	BI	<u>da</u>	Ri	FL	
ABEL MARC W	Ru	La.	ða	LI	FL	Ri	BI	GITLIN GRAHAM N	BI	, FL	Ri	da	La D	Ru		
AHERN SEAN C	Ri	ða	Ru	TL D	LI	Дa	Bl	GUTIERREZ ROMAN C	FL	ða	L]	BI	Ru	Ri	$\mathcal{P}$ a	
AHLE LARRY E	Ri	Ll	ΓL	La.	ða	Ru	<b>B</b> I			~~~	$\bigcirc$	Dur	۸.	, D	FL	
AHMED GHUFRAN	Дa Тi	Ri		۴L ص	BI	Ru	<b>Da</b> FI	HAGEN JEFFREY P	11	BI FI	Pa P	Ru	da Da	Ri Ri	ıı Ru	
AHMED SALIM	B	LI	ða	La D:	Ri	Ru	FL T	HAINING RORKE E	<b>B</b> I	, FL	Pa <b>R</b> i	Ll Ll	ða T	ni Da	.FL	
AHN MYRON D	FL.	Ru		Ri D	° da P	La No	<b>BI</b> Ru	HARKNESS STEVEN M	Ru Ru	BI BI	ni Pa	2 a FL	LI Ri	0a Da	.r L	
AKAMA KEITH T	FL	LI FL	BI Da	Ri Ri	La	<b>da</b> Ru	riu Bi	HARRIS SCOTT R	nu Ru	211 BL	La Ri	L La	LI	0a 0a	FL	
AMEZCUA CARLOS D	LI	1 L	La	R1	ða	r:W	्रम	HAYNES KENNETH HELLNER ERIN G	ða.	Ri	FL ·	2 a Bl	Ru	LI	La.	
BALL FRANCIS M	$\mathcal{D}$ a	Ll	ða	Ra	Ri	FL	<b>B</b> 1	HELLNER ERIN G	0a Oa	La Da	Ru	E.	Ri	LI	٦	
BAUMERT BRANDON M	Lu La	FL	LI	<b>da</b>	Ru	Ri	BI BI	HIGLEY JAY W		FL	Ru	$\tilde{\tilde{P}}_{a}$	ða	Bl	Ri	
BERNSTEIN GOLDA	Ri	BI	ða	La.	LI	FL	Ru	HODSDEN MARY K	Ll	Da	ΓL	<i>Pa</i>	BI	Ri	Ru	
BHAVSAR MEETEN	ða	Ll	Ri	FL	Ru	La	BI	HOLLAND BENJAMIN S	Bl	<i>La</i>	Ri	ΓL	Ru	ða	L	
BITTKER SETH S	Ll	Ri	٢L	La	Ru	ða	El C	HOLMES JACQUELINE	Ri	L	Дa	BI	ΓL	Ru	da	
BLAKE CHARLES L	Ru	$\mathcal{D}_{a}$	Ri	ða	LI	٢L	BI	HOLT GARY R	Ri	. Ru	ða	BI	$\mathcal{P}_{a}$	Ll	ΓL	
BOCHNER BRETT D	Ri	<i>Р</i> а	ΓL	1.1	Ru	<b>B</b> 1	Da	HOSKINS JOHN R	BI	Ri	. Ru	ΓL	. da	Pa	11	
BOURGEOIS DAVID M	L?	Ru	$\mathcal{P}^{a}$	Ri	<b>B</b> I	٢L	ða	HOWARD SUSAN R	Řu		Ri	Pa	BI	ΓL	ða	
BURROWS HERBERT	ða	Ru	Ri	$\mathcal{P}^{a}$	٦L	Bl	1.1	HSU RICHARD	Ru	LI	Bl	Ri	ΓL	$\mathcal{P}$ a	ða	. •
						-		HUMAYUN FARUKH	Ru	L1	$\hat{\mathcal{P}}_{a}$	Ri	ða	<b>B</b> 1	ĪĽ	
CAMPMAN KENNETH L	Pa	BI	ΓL	Ru	[]	Ri	ða	HWAN STEPHEN V	Ĺl ·	Ru	FL	BI	ða	Ri	La.	
CAMPO CHRIS J	Ri	$\hat{\mathscr{P}}_{a}$	BI	ða	Ll	Ru	FL									
CANDELL ERIC M	BI	Ri	Řu	LI	Дa	ΓL	ða	IDA MICHAEL P	Ru	Ll	BI	ða	' La	ΓL	Ri	
CANINO LAWRENCE S	ΓL	Bl	Ri	$\mathcal{P}a$	Ru	LI	<u>da</u>	IZUMI YAYOI	L]	Pa	Ri	ભા	ða	Ru	FL	
CAROSELLI JOSEPH P	BI	fΓ	LI	Ri	Ru	$\mathcal{P}$ a	ða									
CATRAKIS CHARILAOS	FL	Pa	Ru	Ri	LI	BL	ða	JAGADEESH BHARATHI	[]	La	ΓL	BI	Ri	ða	Ru	
CHAMNESS MARK A	BI	Ru	Ll	da	$\mathscr{P}$ a	Ri	FL	JAMES GREGORY A	da	La	Ru	[L]	BI	fL	Ri	
CHEN ALECIA J	ΓL	da	Ri	Дa	LI	Ru	BI	JAQUEZ EDWARD J	da	La .	LI	BI	<u>FL</u>	Ru		
CHEN LEONARD P	BI	Pa	ða	Ru	L!	Ri	FL	JOH JENNIFER J	ΓL	La	LI	<u>ð</u> a	Ru	<b>B</b> I	Ri	
CHEN TIM Y	Ri	ða Di		Ru	La Ta	BI	FL	JOHNSON ERIC C	BI	Ru	La		Ri	ða	FL	
CHENEY DOUGLAS C	Oa D	Ri	La Ta	Lì	BI D:	Ru	· · ـ ]]	JONES WILLIAM M	Ru	0a Su	ΓL	La D'	Ri	BI		
CHENG HELEN H	La Pa	FL Tiles	<u></u> Ж	Lì	Ri	0a m	RU	JUN STEVE	Ru	BI	Ll	Ri	FL	ða	La	
CHENG LARRY	La P	Ru	Ri	LI FI	0a 201	Bl Ri	ΓL		D.	<b>30</b> (		۵.	Ru	Pa	- FL	
CHIN SYLVIA P	La FL	Ru Ri	da Da	FL Ru	BI La	Ri Bl	Ll ra	KASSAN ERIC M	Ri	۳۹۲ FL	니 か	Da Bl	Ri		IL La	
CHOU MIKE T CHOW JONATHAN K	IL Ll	Ri	Da Bl	ru Ru	9 a FL	يەر Da	$\mathcal{L}^1$ $\mathcal{P}^a$	KATZ ROSTEN PAMELA KENY HEMANT V	Ru	IL BI	Oa FL	يەر Ru	ni La	Li Da	La Ri	
COOK CHARLES B	BI	LI	Pa -	Ru	FL	0a Da	<b>R</b> i	KHAN ZULFIQAR H	Ll Ri	Ru	BI	ða.	2 a FL	Ua Ll	La	
CORCORRAN ALLEN M	Da	FL	Ri	Ru	ĨL BI	L	ða	KIEFER THOMAS G	La La	r ue: FL	da da	Ri	L	BI	Ru	
CORDES JOHN	da	Ru	BI	Ri	LL	FL	Pa	KIM DAVID K	La La	Ri	Ru	ða	Ll	e Bl	FL	
COUFAL DAVID E	da	Ll	Ru	Ri	BI	La La	FL	KIM DONG-SU	Ri	Ru	LI	FL	da	en e	La La	
CRAFT BRIAN A	Bl	Ri	ða	La.	Ru	٦Ĩ	LI	KIM JINHA	FL	Ru	ða	La.	BI	Ll	Ri	
CRIM WALTER W	۴L	$\mathcal{P}^{a}$	LI	Ru	Ri	ða	BI	KIM KEANA F	· Pa	ða	Bl	Ru		FL	Ri	
CURTIS KEVIN	$\mathcal{P}a$	BI	ða	ΓL	LI	Ru	Ri	KING ADAM J	FL	$\mathcal{P}_{a}$	BI	Ri	ða	Ru	LI	
		· · ·						KIRBY TARA L	Ri	<b>B</b> 1	FL	Ru	ða	La	Ll	1
			~					KIRILL DIMITRI J	Ru	LI	۴L	ða	Bl	Ri	$\mathcal{P}a$	
DAILEY MARK	FL	<u>B</u> I ·	La .	ða	Ll	Ri	Ru	KISTER SCOTT R	BI	$\mathcal{P}a$	ΓL	Ll	- Ďa	Ru	Ri	
DATTA RUCHIRA	Lì	ða	La.	FL	BI	Ru	Ri	KNOX MELINDA A	Ll	$\mathcal{P}^{a}$	Bl	Ri	Ru	da	FL	
DEEM MICHAEL W	FL	BI	Ru	Ri	<u>ða</u>	LI	<u>P</u> a	KO KWANGHYON T	ða	L	Žа	BI	Ri	ΓL	Ru	
DESAI SAYURI	LI .	La	Ru	FL CP	da FI	Ri	BI D:	KOEHLER JEFFREY A	BI	ða	Ri	Řu.	FL	LI	$\mathcal{P}^a$	
DINAN MARK A	Ru	ða	<u>B</u>	La No	۲L ص	Ll D.	Ri	KOLLMORGEN DANIEL	ΓL	LI	BI	ða	Ri	Ru		-
DINKIN SAMUEL H	FL P		Ru	da D:	La 701	Ri	<b>B</b> I FI	KOSHI RICK H	Ri	FL	La	BI	Ru	ða		
DOLIM SCOTT M	La La	RU 701	LI Ru	Ri	781 FL	Oa Ri	FL.	KRIDER DAVID W	La.	BI	LI	<b>Da</b>	Ri	, FL	Ru	
DUBB LINDSEY N		BI FL	nu: Ri	<b>da</b> Ru	LI	ni Bl	$\mathcal{L}$ a	KRIKORIAN YOGHISH	FL	Ri	Ru	Pa	BI	<u>da</u>		
DUTTON IAN R	0a	-11. -	NI	กเพ	l, l	În î	2 a	KUO YU-HUNG	La .	BI	da	LI	Ru	Ri	FL	
EASTVEDT GARY M	Ru	Ri	ΓL	L	da	$\mathcal{P}_{a}$	BI	KUROSKY TANYA K	FL	ða.	Ri	Ru	BI	La D		
EDWARDS DAVID A	BI	ða	L La	Ri	Ru		<u>ع</u> د ۲L	KWAN MICHAEL	Øa	ΓL	BI	<i></i> Ра	Ri	Ru	LI	
EHLERS MICHAEL D	Ru	0a 0a	Ll	BI	Ri	Дa	FL			•				_		
LILLING BIGHMEL D	u 1193	Va	101	لافلغ		al U	1 L	LAI JANET	BI	LI	Ri	Ru	da	La		
				. '				LAL AMIT	BI	Ri	LI	Ru	ða	FL	La D	
	D.	FI	π =	۸.	<b>70</b> (	[]].	(D)	LAWYER K J	Ru	Ri	ða Tr	FL	LI	<b>B</b> I	La D	
FARNHAM LLOYD A	Ri 781	fL ひ	LI Rai	da FI	<b>B</b> I La	Ru	La D:	LE NGOCDIEP T	Ru	da 701	) [1] [1] [1] [1] [1] [1] [1] [1] [1] [1]	L	<b>Ri</b>	ΓL	$\mathcal{P}_a$	
FERBER ROBERT R FINLEY BENJAMIN E	BI Pa	ða U	Ru Ru	FL P:		LI へ	Ri	LEBORGNE WILLIAM E	da P:	BI	Ri	Ru fi	La P	Ll	FL Date	
FINLEY BENJAMIN E FINLEY DIANA J	Da Da	LI FL	rau Ru	Ri Ll	FL Ri	<b>Oa</b> La	BI BI	LEE ANITA K	Ri	Ll 入	Oa Du	FL	La D:	BI W	Ru	
FIOLA THOMAS M	LI	IL Bl	nu Da	Li Ri	Ri La	Xa Ru	jei FL	LEE EVERETT E	LI	0a 01	Ru D:	FL P	Ri	Bl W	La Fl	
FLOWERS KIM D	ða	بين TL	0a 131	Ri Ll	2 a Ru	Ri	La La	LEE KYUNG W Lin david j	LI Ru	Oa Ri	Ri FL	La 781	Ru	週	FL	
FORMAN SELENA	" La	ða	ریں۔ FL	LI	Ri	Ru	La Bl	LIN DAVID J LIN RALPH S	Ru Oa	R1 Bl	IL Ri	BI BI	Pa FL	<b>da</b> Dur		
FREEMAN ERIK S	2 a Bl	0a Da	FL	Ru	n La	Ri	يەر Ll	LIN RALPH S LIT EUGENE S	· La	يەر Ru	R1 Ll	LI BI	ða	Ru N	La <b>R</b> i	
FUNG ERIC T	ða	BI	Ll	$\mathcal{P}^{a}$	Ru	FL	Ri	LIU CALVIN J	La Bl	nu Ll	EI FL	رور م	Ri	n L		
<b>-</b> •		• من	141	U	u u vsi	1 L,		ale onerit d	الالتع	li a li	ιL	Va	111	"La	กาเป	

# FRIDAY 25 SEPTEMBER 1987

# Rotation

	SUN	Mon	TUE	WED	Τнυ	Fri	Sat
LO EMILY I	ða	Ri	Bl	Ru	LI	Pa	ΓL
LOESCHER MITCHELL	Ll	Bl	Ru	Pa	Ri	ΓL	ða
LOFQUIST DAVID R	Ru	ða	BI	Ri	$\mathcal{P}_{a}$	LI	ΓL
LOH YUN-FONG	Ll	FL	ða	Ru	Bl	Ri	<i>La</i>
LONG DAVE	Pa	ða	Ri	Ll	El.	ΓL	Ru
LU TSUNG-HSIN	Ri	La	Ru	BI	Ll	ða	ΓL
LUCKEY ROBIN E	Ri	Ru	ða	L L	Bl	11	Да
LYTTLE MARK T	ða	Ri	BI	ΓL	Pa	LI	Ru
MACARTNEY-FILGATE BRUCE C	ða	Lì	BI	Pa	FL	Ri	Ru
MAHESHWARI VIJAI	Lì	FL	BI	ða	La	Ri	Ru
MAJEED RAIF	1.1	BI	Ri	ða	Ru	ΓL	Дa
MALONEY MATTHEW T	Ll	Ri	ða	<u>B</u> 1	$\mathcal{P}^{a}$	FL	Ru
MANNING RUSSELL A	Ru	Ri	BI	$\check{\mathscr{P}}_{a}$	ða	LI	FL
MARKARIAN MARK N	L1	Ru	ða	Ri	ΓL	Bl	$\mathcal{P}a$
MAXFIELD HEATH	LI	ða	Ru	BI	FL	$\hat{\mathscr{P}}_{a}$	Ri
MCDONALD MIGUEL K	Ri	ða	BI	ΓL	$\mathcal{P}$ a	Ru	Ll
MCKENZIE DWAYNE P	Ri	ða	FL	<b>B</b> 1	LI	Ru	$\mathcal{P}a$
MCLAUGHLIN STEVEN A	Bl	ða	LI	$\hat{\mathscr{P}}_{a}$	Ru	Ri	FL
MERRILL DAVID J	ða	Ru	ΓL	$\mathcal{P}$ a	LI	Ri	BI
MIKOLAJCZAK CELINA J	Ll	Ru	$\mathcal{P}a$	ða	BI	Ri	ΓL
MILLER DAVID E	FL	BI	ða	LI	Ri	$\mathcal{P}^{a}$	Ru
MITCHELL WILLIAM	FL	LI	ða	$\mathcal{P}_{a}$	Ri	BI	Ru
MLYNAR THEODORE J	Bl	Ru	<i>Р</i> а	ða	LI	ΤĪ	Ri
MOSSEY MICHAEL P	ða	BI	Ru	FL	L]	Ri	$\mathcal{P}^{a}$
MOUSTAKAS ARIS	FL	$\widetilde{\mathscr{P}}_a$	ða	Ri	Ru	Ll	BI
MUKHERJI ASHOKE A	Ri	Ll	Ru	FL	Bl	ða	Да
MYERS CHRISTOPHER J	11	Ru	Ri	Bl.	ΓL	ða	$\mathcal{P}^{a}$
MYJAK MIRIAM A	FL	BI	Ll	Ru	ða	Ri	La
NAGY SANDOR	FL	Ru	ða	BI	LI	Ri	Pa
NEWMAN ERIC C	ða	BI	Ru	Ri	Pa	ΓL	Ll
NG JIMMY K	ða		BI	11	<i>Pa</i>	Ri	ΓL
OHANISSIAN ANDRE	Ru	۴L	BI	$\mathcal{P}^{a}$	]	Ri	ða
OHTAKE TADAHIRO	La.	Ri	da	BI		Ru	FL
	م	FL	Pa	Ri	Bl		Ru
PADUANO MATTHEW C	Oa FL	IL Ri	9 a Ru	ni Da	्या Bl	LI	$\mathcal{P}_a$
PADULA ROBERT J			Uniu. Da	Ua Bl	Ri	EL.	2u La
PALM STEVEN L	LI BI	Ru Li	E TL	بور Ru	Ri	ða	La La
PANG DANIEL	2	L3 L1	Ru	Ri	rt FL	BI BI	Du Da
PAPADOPOULOS ANNETTA M	Oa Ru	LI FL	nia Da	Ri	IL Bl	ші Да	Ll
PARK DAVID J	rsu Ru	IL Ll	UA BI	da Ni	Ri	La La	FL
PAUL WESLEY J	File FL	Ri	Land Bel	0a Oa	Ru	La La	L
PAVRI BETINA	TL FL	Ri	т Да	BI	da da	2 a 11	Ru
PETERSON DAVID M PETERSON DOUGLAS E	IL La	ða -	2 a Ru	BI BI	Ri	FL	Ll
PETERSON DOUGLAS E	2 a Ru	BI BI	fL	LI	Ri	Da	Д Да

# Rotation

	SUN	Mon	TUE	WED	Тнυ	Fri	SAT
SAHANI MANEESH	Æ	<i>Р</i> а	ða	ΓL	Ri	LI	Ru
SAIPETCH PONGSKORN	$\hat{\mathcal{P}}^{a}$ .	Æ	ΓL	ða	Ru	LI	Ri
SCHAFER DEAN J	FL	LI .	Ri	da	Ru	BI	$\mathcal{P}a$
SCHAMBERGER G T	Ri	Ru	FL	da	$\mathcal{P}$ a	BI	LI
SCHIMA SUSAN A	Ru	ΓL	ða	LI	$\mathcal{P}$ a	ÆI	Ri
SCHMIDT JOHN P	ઉદ્ય	Ri	ða	Ru	ΓL	$\mathcal{P}a$	Total Second
SCHMIDT MARK A	Ru	Ri	LI	da	$\mathcal{P}a$	BI	FL
SCHNEIDER ERICH R	da	BI	FL		$\mathcal{P}a$	Ri	Ru
SEAWARD SAMANTHA A	$\mathcal{P}$ a	LI	Ri	ða	FL	BI	Ru
SEED HUCK	Ri	Ru	હા	FL	Ll	ða	$\mathcal{P}$ a
SELEGUE DYLAN B	FL	Ri	LI	Ru	BI	ða	$\mathcal{P}$ a
SETO JANE	Pa	BI	Ri	FL	ða	Ll	Ru
SHANNON SEAN P	LI	Bl -	Ri	FL	0a	Ru	$\mathcal{P}^{a}$
SHEK ALEX	Ll	Ru	Ri	ða	ΓL	La .	BI
SHEN RAYMOND T	Ri	<i>Р</i> а	ða	Ru	ΓL	BI	LI
SHERIDAN JULIE	Ri	BI	Ru	LI	FL	Ŷа	. da
SHIM BRIAN R	ΓI .	0a -	Ru	Ŕi	$\mathcal{P}$ a	BI	ΓL
SHMURUN ARTHUR	11	Ru	BI	FL	Ri	$\mathcal{P}a$	ða
SHORS STEPHANIE M	$\mathcal{P}$ a	ða	Ri	FL	BI	Ru	LI
SIDNEY RAYMOND M	Ri	BI	Ru	ða	Ll	FL	Pa
SLONEKER FREDERICK F	BI	Ri	ða	FL	Ru	LI	$\mathcal{P}a$
SMITH JARED L	Ri	$\mathcal{P}^{a}$	LI	Ru	BI	ΓL	ða
SOBELMAN STEVEN M	Bl	LI	ΓL	Ri	$\mathcal{P}a$	Ru	ða
SOCOLOW PAUL	Bl	Ll	La	FL	Ru	Ri	da
SOUTHWORTH ROBERT G	FL	Ri	ða	LI	BI	Ru	Pa
STIPE BARRY C	FL	Ru	Ri	BI	Ll	$\mathcal{P}a$	ða
STORM KURT J	Ru	Ri	La.	LI	ΓL	BI	ða
STROUD RHONDA M	FL	<i>Р</i> а	ða .	Ru	BI	Ri	LI
SUKLIKAR ATUL	La '	Ru .	BI	LI	FL	Ri	0a
SWANSON WILLIAM J	$\mathscr{P}$ a	Ri	LI	BI	FL	ða	Ru

# Help.

PADULA ROBERT J	1 L	R1	하는	0a	Set .	1.l	2 a								
PALM STEVEN L	L]	ភិម	ða	BI	Ri	FL	La .		æ	6	D.	FI		۸.	701
PANG DANIEL	BI	LI	FL	Ru	Ri	ða	Дa	TANG HAMILTON R	Pa	Ru	Ri	FL FI	LI	ða Di	BI
PAPADOPOULOS ANNETTA M	ða	Ll	Ru	Ri	ΓL	BI	$\mathcal{P}$ a	TUCKER CHANDRA L	BI	Ri	<i></i> Ра	FL D:		ða -	Ru
PARK DAVID J	Ru	ΓL	ða	Ri	BI	Ĺа	Lł	TYLER MATTHEW L	Ru	ða	LI	Ri	<b>Д</b> а	ΓL	BI
PAUL WESLEY J	Ru	LI	BI	ða	Ri	Pa	FL				Ø	•	0	FI	<b>70</b> I
PAVRI BETINA	ΓL	Ri	BI	ða	Ru	<i></i> Ра	LI	VAIL EDWARD C	Ri	LI	La D	<b>d</b> a	Ru	FL	BI W
PETERSON DAVID M	FL	Ri	Žа	BI	da	LI	Ru	VAUGHAN MARK J	Ru	FL .	Ri	$\mathcal{P}^{a}$	ða	Ll .	BI
PETERSON DOUGLAS E	$\mathcal{P}a$	ða	Ru	BI	Ri	FL	Ll		51	Ø	D:		<b>701</b>	0	<u>م</u>
PHAM BAOQUOE N	Ru	BI	FL	Ll	Ri	ða	<i></i> Ра	WARNER ELIZABETH A	FL	<i>Р</i> а	Ri	LI	BI	Ru	<b>ರಿ</b>
PHAM HOANG X	$\mathcal{D}a$	FL	BI	Ru	ða	Ri	Ll	WEIN ALEX	BI	LI	Ru	FL Ø	ða FI	Ri	La 201
PHAN TAN	Ll	Ri	ΓL	ða	Ru	BI	La .	WELSTAND ROBERT B	0a Di	Ri	Ru	Pa D	FL		<b>B</b> I
POTTENGER MICHAEL D	ða	Ru	Ll	Ri	$\mathcal{P}^{a}$	BI	FL	WENDEL JOHN A	Ri		<b>B</b> I	La D	LI	ða Da	Ru
PRATER JACK L	<i>P</i> a	LI	FL	Rư	ða	BI	Ri	WENZEL PETER M	FL	Ru	Да	Ri	. L1	da FI	BI D
PRICE ALLEN C	Ri	٢L	LI	Bl	ða	Žа	Ru	WONG ALLAN Q	Ri	<b>d</b> a	La Pa	BI	LI	FL	Ru
								WONG DOUGLAS	Ru	La	Ri	LI	BI	<b>D</b> a	11
								WU SU-LIN	Ll	La .	BI	ða	Ri	FL	Ru
						БТ	<b>D</b> .	WYCKOFF PETER S	ða	<b>Д</b> а	ΓL	Ll	Ru	Ri	B
RAGUIN JOHN V	Ru	BI	La.	LI	<u> </u> da	ΓL	Ri								
RAM RAJEEV J	. Ru	ΓL	BI	Ri	<u>da</u>		La Di								
RAMIREZ CARLOS	BI	Ru	da	L1	FL	La D	Ri								
RANKA JINENDRA	ða	Ru	ΓL	હા	Ri	La D	Ll								
RHOADARMER DAVID D	LI	ða	BI	Ru	Ri	La	ΓL		D.	301	æ	<u>ک</u> ړ	FL	Ru	· LI
RICCI MICHAEL R	Ru	FL	LI	$\mathcal{P}$ a	BI	ða	Ri	YAN XIAOJIAN	<b>R</b> i FI	) 1911 - 1913 - 1914 -	La 701	<b>Da</b> La		Ri	R
RICHARDSON PETER	Ri	Bl	ΓL	L1	ða	Ru	La.	YEAKLEY ANNA M	FL P	da Da	<b>B</b> I		LI FI		
ROLLINS ERIC	$\mathcal{P}_{a}$	LI	ÐI	FL	Rư	ða	Ri	YEE JULIE L	La.	-da Di	Ru	Ri	FL FI	BI WI	$\mathcal{L}^{\mathrm{LI}}$
ROZAK MICHAEL J	$\mathcal{P}$ a	ΓL	Ru	BI	LÌ	ða	Ri	YOUSSEFMIR MICHAEL	0a	Ri	Ll FI	Ru D'	FL	<b>1</b> 11 . Du	
RUIZ SERGIO T	Ri	Ru	Ll	$\mathcal{P}$ a	ΓL	ða	BI	YUAN CHEN	da B	Bl	FL N	Ri	LI	Ru	$\mathcal{P}$
RUNGE DIRK P	Ll	ða	BI	Ri	ΓL	Ru	$\hat{\mathcal{P}}_{a}$	YUAN HOWARD	FL	LI	ða	BI	Ru	$\mathcal{P}$ a	R
RUSSELL ERIK L	Ru	ða	$\check{\mathscr{P}}$ a	BI	ΓL	Ri	LI .			()	<b>D</b> .	~~.	FI		5
RUTMAN NATHANIEL Z	$\mathcal{P}^{a}$	BI	ða	Ŕu	Ri	Ll	FL	ZHU XIAOLEI	ða	La	Ri	BI	FL	Ll	Ru

### FRIDAY 25 SEPTEMBER 1987

# **SPORTS**

# **Beavers'** Water Polo Off To A **Good Start**

# -Win First Game Of Season 24-19

#### by David Bruning

The Caltech Battlin' Beaver Water Polo Team achieved their first of what is likely to be many victories in the first game of the year. The squad went down to Chapman College in the city of Orange expecting a challenge and a victory. What they got was a rout and three stitches.

The game started off in typical Caltech fashion: a 3-3 score after about two minutes of play. This indicates the normal defensive battle that our players wage against our oft large and fierce opponents. By the end of the first quarter, the score was 10-4 and Bruno already had 8 of his 12 goals. By halftime, the score was 16-9 and many frosh were getting ready to play their first ever water polo game.

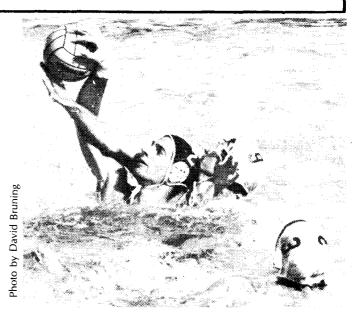
But alas, all was not to go well. The 6'8" frosh phenomenon, Bill Swanson, started to warm up to play goalie. During this warm-up, he managed to stop a ball between his third and fourth fingers. In the

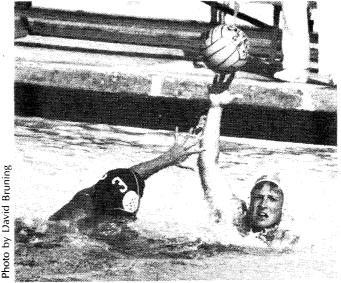
process, the webbing between his fingers was shredded, and Bill was soon on his way to the emergency room. The current prognosis advises approximately two weeks on injured reserve.

The rest of the game was just as exciting as the first half. Almost everyone on the team scored, including Devin Leonard on outside and penalty shots, Chris Assad on a seeing-eye shot from half-tank, Chris Edgington on at least one of his fast-break shots, Graham Gitlin on a skip-shot, and others whose names were lost in the jumble of the packed score sheet. The final score was 24-19, which was certainly a great way to start the season.

By the time you read this paper, the polo team will probably have demolished Rio Hondo on the path to a great season. Please come out and cheer the polo Beavers on Saturday, October 3, when the illustrious alumni of Caltech return for a match.

The Beavers battled and battered their way to a win against Chapman College last week. Top right: Bruno jockeys for the ball while two chaps from Chapman strive to take it away. Below, the contenders churn up some frenzied white water to pass the ball toward the goal. Final score in the game was Caltech 24, Chapman 19.





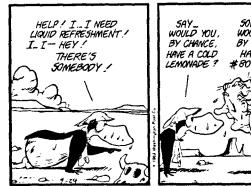




©1987 Hewlett-Packard Company PG 12703

ОН WELL.

#### from page 4



HOW WE GOT TO BE





continued on page 10

## SPERM DONORS NEEDED

FRIDAY 25 SEPTEMBER 1987

Earn up to \$105 per week. University students only. Area's largest sperm bank. Call: (213) 553-3270.

California Cryobank, Inc. 2080 Century Park East #306 Los Angeles CA 90067

And how it can benefit you. You've probably noticed we often describe ourselves as "Southern California's #1 Audio/Video Specialists", It's an important difference that not only sets us apart from other retailers, but means bet-ter service, selection and savings for you.

e sell only top brand audio and video. No microwaves. refridgerators or answering machines. That means we can really become familiar with the components we sell,

evaluate their features and performance and give you qualified advice. Not having a bunch of dishwashers & trash compactors around also means we can use our store space to offer you a better selection of high quality audio and video components.

ur salespeople are audio/ video experts. Yes, everyone uses the phrase "expert". But none deliver on it quite like Rogersound Labs. Technology To keep up with it, potential RSL salespeople must go through one of the most demanding training programs in the business

320 SOLID HOURS! Even if they come to Rogersound Labs with years of audio/ video experience (which most do, because in the industry we're a desirable place to work), they still go though our 8-week course including many grueling exams. Here we stress technical knowledge (instead of sales-closing ability), as well as how to relate this knowledge to you, the customer, so we don't "talk over your head" with technical jargon. Plus all of our salespeople frequently attend refresher meetings to keep up on the latest.



pecializing keeps our prices low and our buys amazing. Sure, there are stores that offer more brands. We specialize in only the best, and by doing so, often become our manufacturers' biggest dealers. They come to us first with closeout buys on technologically-advanced models because of this volume-buying capability, and

because they feel our people have the knowledge to best demonstrate their products' technological aspects and features. Just check out this ad for examples



N CALII

means that you can hear (as well as view) before you select.

There's nothing worse than being assaulted by a whole wall of flashing lights and blaring components. Instead, everything sold at Rogersound Labs is ready

for demonstration. In orderly sound and video rooms where you can sit down, relax and really experience a componen for as long as you like. You can even bring in your own music or videotapes to use for demonstration.

e got to be Number One by NOT working on **commission**. RSL offers a refreshing alternative to the fast-talking, high-pressure railroading types found at most of our competitors. We take the time to listen to your needs and apply our product knowledge. You end up with exactly what you need. No more. No less. We figure that

if you treat someone right, you don't need pressure. Stop in soon and we're sure you'll agree that shopping at Southern California's #1 Audio/Video Specialists is well worth it.

Minimum Size! \$**85**EA **1600** MINI MONITOR A true audiophile mini-speaker 

- Perfect for extension speakers Great for rear surround sound
- Excellent "satellite" performance
  6.5-inch polypropylene woofer
- Balanced drive tweeter
- High power handling
- Detachable grilles

Though just 12 inches high, our remarkable **RSL 1600 Mini Monitors** put out audiophile quality, room-filling sound. With a bass response of -3dB at 55Hz, these speakers would be a great buy at triple the price, but it's always been the RSL way to offer the best values anywhere. RSL 1600 Mini Monitors image superbly, render midrange with fluidity and detail and have smooth, well-dispersed treble. We guarantee that you will be utterly flabbergasted at their performance or your money back within 7 days. And you also get a 5-year Parts and Labor Limited Warranty.

FACTORY

DIRECT



# **NO BETTER RA** OFFERE

Kenwood's powerful \$749 matched Spectrum system has unique features and the unbeatable performance of true separate components. If you pay less for an off-brand anywhere else you'll be settling for less for years to come.

- Separate KM-106 125 W/Ch Power Amp
  Separate KC-106 Control Preamplifier
  w/ built-in 7-band EQ, video sound inputs
- 16-preset KT-56 Quartz FM/AM Tuner with
- autoscan tuning Double Cassette **KX-56 Dubbing Deck** with Dolby B\* high speed dubbing & relay play Double Cassette **KX-56 Dubbing Deck** with Dolby B\* high speed dubbing & relay play

MFR LIST \$1365

4

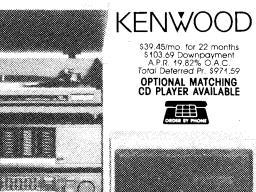
Or just \$39.45/mo.

No payments 'til Dec.

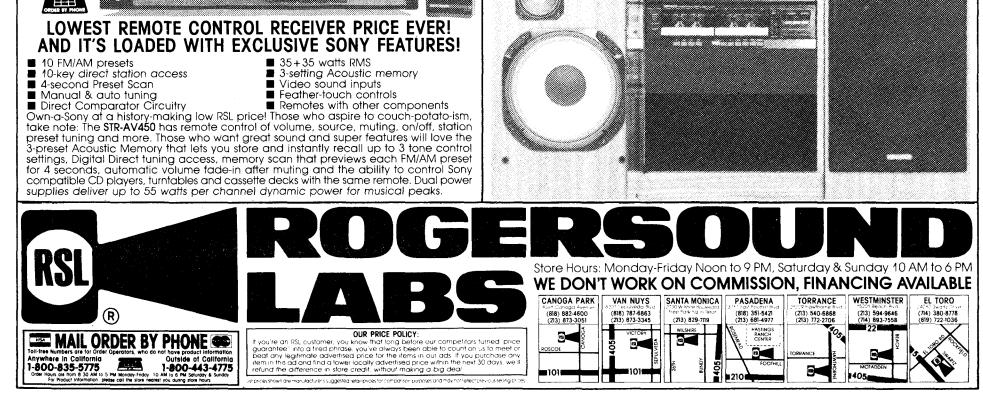
on approved credit \*Dolby is rumored to be a

trademark of Dolby Licensing Inc

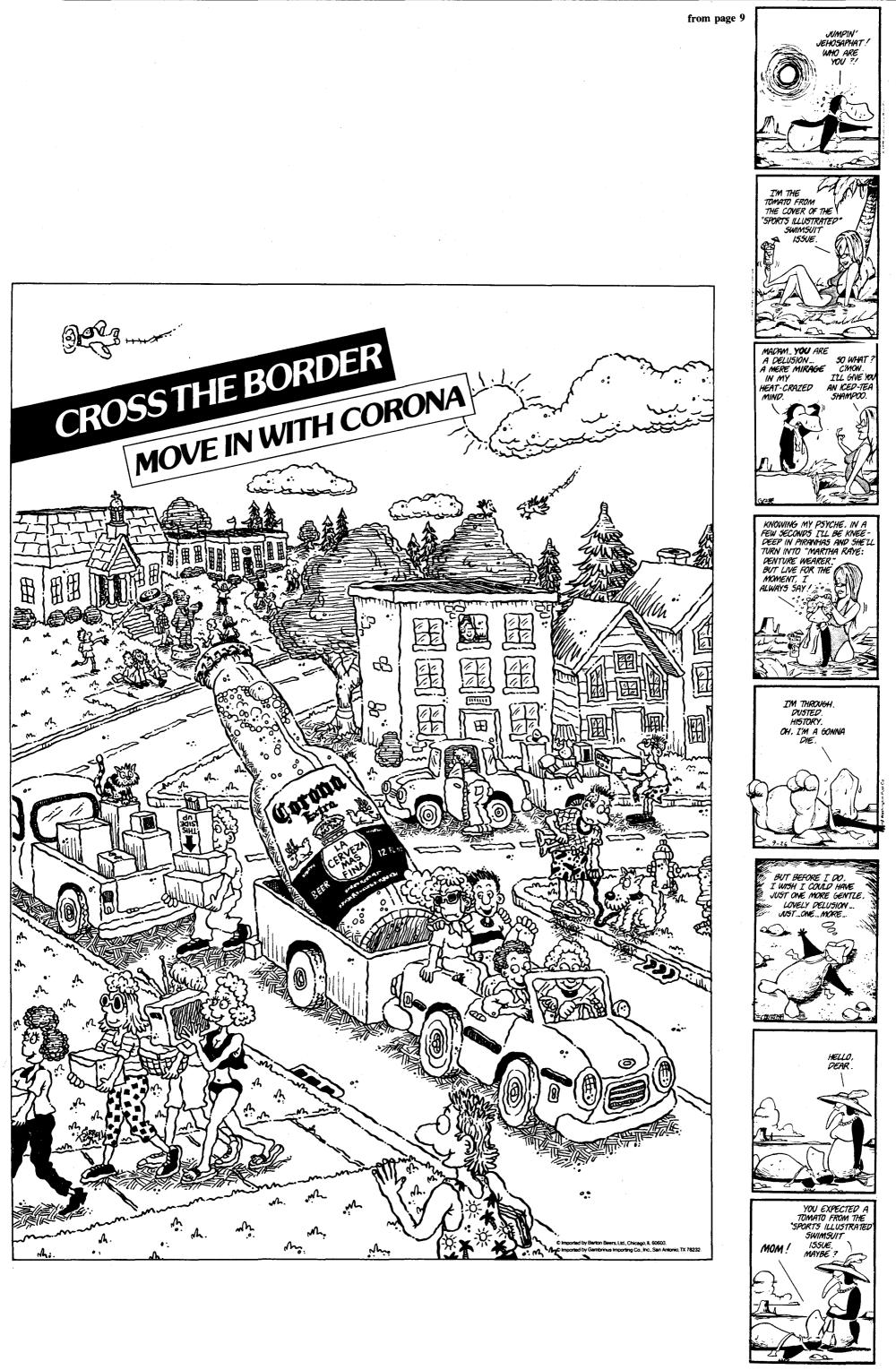
- 45% OFF
- KD-26 Auto-return Belt-Drive Turntable with
- cartridge 12-inch 3-way JL-760 Floorstanding Speakers
- Beautiful SRC-560 matching audio rack with

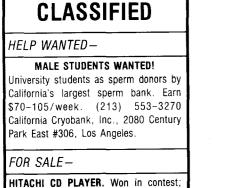






## FRIDAY 25 SEPTEMBER 1987





BRAND NEW. Plays 6 CD's. Also Panasonic 51/2" B&W indoor/outdoor TV. 793–3019

#### SERVICES -

INSURANCE WAR! We'll beat anyone's prices or don't want your business. Sports cars, multiple tickets, good-driver discounts. Request "Caltech Plan." (818) 992–6966 or (213) 873–3303. RATES....\$2.50 for first 25 words; ...10¢ for each additional word. Send written ad with payment to 25–58.

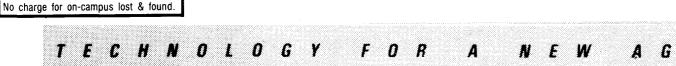


International Youth Exchange, a Presidential Initiative for peace, sends teenagers like you to live abroad with host families. Go to new schools.

Make new friends. If you're between 15 and 19 and want to help bring our world together, send for information.

Write: YOUTH EXCHANGE Pueblo, Colorado 81009







Who Do You Call When You Want To Identify A Soccer Ball From 22,300 Miles In Space?

If your answer is Ghost Busters, we want to wish you all the best and have a nice day. If you answered "TRW", here's the rest of the story.

The U.S. Air Force asked us to build a ground-based electro-optical surveillance system that could identify an object the size of a soccer ball from 22,300 miles in space. We did it, utilizing 3 telescopes and a large computer system. Then they asked us to build four more. Quite an achievement, but it's just one example of TRW's impact on the future.

TRW offers you the freedom to move among a wide variety of opportunities in microelectronics, high energy lasers, large software systems, communications, and scientific spacecraft. If you're majoring in engineering, computer science, math, or physics, and want to be with a company that's driving technology into the next century, it's not too soon to talk. Tomorrow is taking shape at a company called TRW.

If you are unable to see us on campus, please send your resume to: **TRW**, **College Relations**, **E2**/4000,



### WELCOMES STUDENTS WITH MORE MAGIC MOMENTS

Welcome to all students! This year Public Events has planned an especially exciting season of performances beginning on Saturday, October 3 at 8 p.m. in Beckman Auditorium with **The Vienna Choir Boys**. A variety of choral music is offered by these young choristers. CIT student prices to this event are \$12.50-11.25-10.00.

Fast-moving displays of flashy hocus-pocus will amaze and astound you when **David Seebach** brings **"Wonders of Magic"** to Beckman Auditorium on Saturday, October 10 at 8 p.m. This remarkable magician will leave you entranced with innovative levitation and spectacular illusions. CIT students can purchase tickets to this event for only \$10.00-8.75-7.50.

Then on Tuesday, October 13, **The Second City Touring Company** comes to Beckman Auditorium with rip-roaring comedy that will knock you off your seat. See tomorrow's stars today as the company, which spawned John Belushi, Joan Rivers and Bill Murray, deals with social, cultural and political satire. CIT student tickets are \$7.50-5.25-5.00.

Speaking of political satire, you'll want to order your tickets NOW for "The Laughter and Song of Politics" with Mark Russell on Friday, February 19, 1988. This show is almost sold out already, so call the Ticket Office today. CIT student prices are \$12.50-11.25-10.00.

By popular demand we are bringing back such favorites as The Flying Karamazov Brothers, the San Francisco Mime Troupe, the Cambridge Buskers and many more. You can also see such superstars as Helen Reddy and The

One Space Park, Redondo Beach, CA 90278.

TRW Inc. 1987. TRW is the name and mark of TRW Inc.

Because Anywhere Else Is Yesterday.

Equal Opportunity Employer U.S. Citizenship Required

**TRW will be on** campus Nov. 11 See your college placement office to sign-up.



**A Company Called TRW** 

# WHAT GOES ON

#### **Minority Fellowships**

The National Consortium for Graduate Degree for Minorities in Engineering, Inc., (GEM) is accepting applications for its 1988 Fellowship competition which will provide one-hundred and thirty (130) awards to minority students in engineering.

Designed for members of ethnic groups that are underrepresented in engineering, the program's goal is to increase the pool of minority students who receive master's degrees annually in engineering. Persons applying for the program must be American Indian, Black American, Mexican American, or Puerto Rican, and must be citizens of the United States. At the time of application, the minimum academic requirement for the student is enrollment in the junior year of undergraduate study in one of the engineering disciplines. Those presently in their senior year or recently graduated are also encouraged to apply.

As a GEM fellow, each participant must be free to work during the summer as an intern for a member employer and must complete the academic work for the master's degree at one of the member universities. In all, there are 52 member employers and 52 member universities.

Each fellowship pays tuition, fees, and a stipend of \$5,000 per academic year, as well as provides summer employment with a sponsoring member employer. The total value of the award is anywhere between \$20,000 and \$30,000 and depends upon which member university the Fellow elects to attend.

Applicants must be received by Decem ber 1, 1987. Awards will be announced February 1, 1988. Information on the program, as well as application materials, may be obtained from:

GEM Program P.O. Box 537

Notre Dame, IN 46556

### **TACIT Presents**

Calling all thespians! The organizationmeeting for TACIT's production of Oliver! and "A Life in the Theatre" will be held Sunday, October 11 at 1:00 pm in Winnett Center Lounge. Anyone interested in participating in the cast, crew, orchestra or production side of things should be sure to come by. You NEEDN'T ACT to be in-volved. If you have any questioons or are interested and unable to attend, please contact ROBERTA at x6259.

#### Work-Study At The Red Door

Work-Study jobs paying \$6.00 per hour are available at the Red Door Cafe (2nd floor of Winnett, around the corner from The Y). Available shifts are 2-6 pm, Monday-Friday, 12-5 pm Saturdays, and possible evenings from 8-12. The Monday shift may be lengthened to 2-7 pm. Require-ments are: a liking for people and the ability to ask for help without embarassment. Flexibility and a sense of humor are musts. Apply at the Red Door, or call x6158.

#### Watson Fellowships

The Watson Foundation provides postgraduation fellowships of \$13,000 (\$18,000 for married students) for a year of independent study and travel. Fellowships are not intended to support extended formal study at a foreign university. They encourage, instead, an informal break in the normal sequence of undergraduate/post-graduated education. Caltech students are frequently chosen for this award. In fact, four recent graduates-Mark Carlin, Joe Francis, Rosemary Macedo and Andy Tikofsy-are on Watson Fellowships this year.

Drafts of project proposals are due on Friday, October 16th. Seniors interested in applying for these travel fellowships should talk to Gary Lorden or Jeanne Noda in the Deans' Office, 102 Parsons-Gates.

#### Amateur Radio Club

On Tuesday, October 6 at 8:00 pm in the Y Lounge (upstairs Winnett) the Caltech Amateur Radio Club will have its 1987-88 organizational meeting. Free pizza and cold drinks will be provided to accompany a talk on the history of and plans for the club in the coming year. If you are a licensed "ham" or if you are just interested, please drop by. Bring your ideas and your two-meter handhelds.

Informal club get-togethers are on Tuesdays at 8:00 pm in the Radio Club Shack in Winnett Student Center. Formal meetings are set for October 6, December 1, February 2, April 5 and June 7. Further information about the club may be obtained from Dave Ritchie, the club secretary, at (818) 449-7371. You may also leave a message on the club's answering machine at x3939. Membership is open to all members of the Caltech community including undergraduates, graduate students, staff, faculty, alum-ni, jpl-ers, and hangers-on. Anyone interested is encouraged to get in touch with Dave Ritchie-demonstrations and tours can be arranged at any time.

#### Feeling Operatic?

The 1987-88 Los Angeles District Auditions of the Metropolitan Opera will be held October 15-17 in Hancock Auditorium at U.S.C. The auditions are open to singers between the ages of 19-35 whose voices are of operatic caliber, who have had voice training, and who have the recommendations of two qualified sponsors. Winners receive cash prizes and may compete in the Western Regional Auditions, held November 12-14 also at U.S.C., with the opportunity to progress to the national finals competition at the Metropolitan Opera in New York. For further information and application forms, write to Metropolitan Opera Auditions, P.O. Box 622, Arcadia, CA 91006 right away. Deadline for returning the applications is October 1.

#### Learn To Fly!

Have you ever wanted to fly an SR-71? Did you know that a lot of people in the Caltech Flying Club would like to also? We don't have many of those available, but we do have four other aircraft which are only a little slower than the Blackird, and they are just waiting for new members to fly them. If you would like to find out more about the Aero Association of Caltech, then CONTACT (a little aerial humor there): Jay Ebersohl, 1-55, x6182, or Jim Kaufman, 264-33, x3807.

#### Lose Blood, Gain Beer

The Caltech Fall Blood Drive will be on Tuesday, October 27 (9:45 am to 2:30 pm), Wednesday, October 28 (12:15 to 5:00 pm), and Thursday, October 29 (8:15 am to 1:00 pm). There will be a contest between the Graduate and Undergraduate houses to see who can donate the most pints of blood. The rules are:  $\frac{1}{2}$  keg of beer or an equivalent amount of soft drinks goes to the house with the highest percentage of donors. The blood drive will be in Winnett Lounge. Please make appointments in advance if you can, although drop-ins are welcome if you can't plan ahead. For appointments call Denise Okamoto, x6374 in the Personnel Office.

#### Caltech Christians

The Caltech Christian Fellowship will have its first meeting of the year on Tues-day, 29 September, downstairs in the Winnett Lounge. All are welcome to join in song, prayer and fellowship. For informa-tion phone Paul Smith at 449-8391 or x6522.

# Language

While the core of the Foreign Language program remains the same, there are some new things in store worth noting:

First a change that will affect all second year language students. The Humanities faculty has voted to grant advanced Humanities credit to the sixth quarter of language (L 103C, L 132C and L 153C respectively)-a move which students will appreciate.

Here is your chance to get a quarter of third year German added to the program. If enough students express interest in such a course, Professor Andreas Aebi will offer it in the spring quarter. It will focus on advanced conversation, reading of newspapers and contemporary literature, essaywriting and stylistics and discus-sion of current events, and will receive advanced Humanities credit. Please drop a line to Professor Aebi (101-40) or call him (x3620) to indicate your possible commitment to such a course.

Professor Sigrid Washburn will teach two German Lit courses in Translation (L 160 A,B). While the fall quarter course is not new (Highlights of German Lit from the Middle Ages to the Romantic Period) it has a new reading list this year, ending with Kleist's Marquise of O and the showing of Eric Rohmer's famous movie of the same title.

The winter quarter course, however, is completely new. L 160 B will focus on "Exile Literature, 1933-45" and cover stories, novels and plays by German writers who settled in the L.A. area after fleeing Nazi Germany: Heinrich, Thomas and Klaus Mann, Bertold Brecht and Lion Feuchtwanger. Movies based on these works will accompany the course.

Meanwhile, the German Film Series will continue its successful course, featuring, this year, seven

movies on various images of World War II.

In the fall quarter Professor Smith will teach contemporary French literature (L 152 B) in conjunction with movies based on or related to the literary works discussed in class.

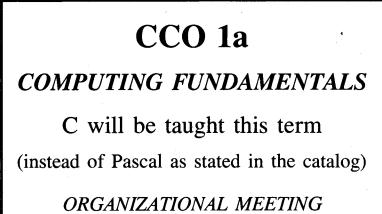
In the winter quarter, newly appointed Professor Anthony Zielonka (fresh from the U.K.) will teach the Nineteenth Century French Novel in French (L 105). It will include novels by Benjamin Constant, Stendhal, Balzac and Flaubert and will also be accompanied by relevant movies. Since the reading and discussions will be in French, this course will, in effect, duplicate as a third year French and answer the needs of students who expressed the desire to continue their study of the language beyond the second year level. It will receive advanced Humanities credit.

Professor George Cheron's Intermediate Russian and Russian Lit in Translation (L 153 A,B,C,and L 165 A,B,C,) will have a more flexible schedule this year. Note that, due to Professor Cheron's reearch voyage to Russia, the OM for 153 will be Monday, October 5th, at 2:00 pm in Baxter 125; as for 165, it will organize on Monday, October 5th at 1:00 pm in Dabney 2.

Finally, Professor Maryse Condé from France and Guadeloupe will offer two new Lit courses the spring quarter: an "Introduction to the Literature of French and English speaking ·Caribbeans" and another one more theoretical (and still untitled) which will focus on the relationship of oral and written literature. Professor Condé was on the Sorbonne faculty and taught in Africa. She is a distinguished critic of third world literature as well as an awardwinning playwright and novelist. We hopy many students will avail themselves of this opportunity to study non-western literature with a highly qualified specialist.

Bon appétit!





Tuesday, Sept. 29, 3 P.M. • 102 Steele

### CAMPUS COMPUTING ORGANIZATION