Robert W. Neumann, computer operator (left), is stationed at the console, and Betty L. Kinman, programmer, is by a 1311 disc drive. Mr. Neumann was formerly the vice president for public relations and development, and currently is also chairman of the University Councillors, a group of advisors to the University president.

He and his wife Shirley are residents of Loma Linda. They have three children: Yvonne, Peter, and Debbie.

Mr. Pettis, a Republican, defeated the Democratic incumbent, Ken W. Dyal, by more than 12,000 votes. The last available tally listed 105,400 votes for Mr. Pettis and 89,968 for Mr. Dyal. San Bernardino County, strongly Democratic by registration, thus elected a Republican to Congress for the first time in its history.

The founder of four major businesses, Mr. Pettis, is now serving as a civilian in the Air Force.
The Computer’s Role

This issue of University SCOPE provides a brief glimpse into the role computers are playing here at the University.

Some of the information processing machines and the men (and women) who use them and keep them ticking are detailed on these pages.

Actually, there are several computer-type instruments on campus, though they are small and specialized, scattered in classrooms and laboratories.

Each of our two major centralized systems will soon be programming for some of the largest, most powerful types of computers commercially produced. The IBM 360 computer at California Lutheran University at Los Angeles is the ‘Cadillac’ of its line.

How are these two systems used?

The University’s Data Processing Center serves the needs of the hospital (and shortly its successor, the new Medical Center); the administration, including academic and student data; and the foundation, which covers the retail stores, business and accounting offices, various services.

The Scientific Computation Facility, on the other hand, is mainly occupied with scientific research and educational programs. The project funding of the facility is primarily from without the University. That of the center is largely from within the University. Separate facilities are needed for the fundamental research projects and avoid confusion of personnel and computer time allocation.

The University’s original data processing system proved a great boon in the handling of what had become an overwhelming task. In actually, sufficient trained personnel are employed to handle the required information processing. The computer can do it at the drop of a transistor.

These amazing electronic marvels have, for many tasks, changed an innovation to a necessity.

University Talent Program

Slaves Variety of Performers

Over 50 University students will participate in the University Library Program this Saturday at Burden Hall, according to Charles T. Weidner, chairman of the University Library.

Cash prizes will be given to the group that offers the most entertaining and well-planned program for the public. The program will include instrumental and vocal music as well as recitations.

The schedule for the third University Talent Program, set for the week of April 24, is as follows:

March 31, 1966
12:00 noon

The program will feature a variety of musical numbers, as well as recitations and other forms of entertainment.

The University Talent Program is a great opportunity for students to showcase their talents and gain experience in public speaking and performance.

In Loma Linda University this month...
E. JAN DAVIDIAN, DDS, (left), a graduate student in orthodontics, discusses a mathematical model of stresses and strains to which a tooth is subjected, with Ivan R. Neilsen, PhD, professor of physiology and Scientific Computation Facility co-ordinator. This model is being programmed for the computer in order to provide improved understanding of orthodontic problems and corrective procedures.

ROBERT R. WRESCH, SNIF, receives instruction on the use of the "computer tutor" from Clarence R. Collier, MD, chairman of the department of physiology. The "tutor" teaches medical students acid-base balance in the human body.

JUDY HAITS, statistical assistant, and Paul Yahika, statistician, pour over computer reports. Some studies involve extensive statistical analyses of vast amounts of data.

MARILYN R. DAVIDIAN, Scientific Computation Facility secretary, changes the disk file on the IBM 1311 disk storage drive. Each disk can store 2,000,000 digits of information, or four average 50,000 word books. Any piece of needed information may be retrieved from the disk file in 22/1,000 of a second.

CHARENE McCONAUGHY, GS, transcribes electrocardiogram records for the magnetic disk file of the computer. Old fashioned methods of searching through medical records are slow and inefficient, and are giving way to computer-based information retrieval techniques.

SUSAN J. DYE, MRA©67, Leslie N. Rau, MRA©67, and Sharon L. Culpepper, GS, (standing, left to right) receive instruction in computer programming from Jere E. Chrispen, director of programming and operations at the Scientific Computation Facility. Medical Record Administration and Nutrition and Dietetics students learn computer programming as part of their courses of study.
Shirley D. Craig, DH©67, or at least Linda H. Harsh, DH©67, hopes "Trying," was presented last Thursday night.

Next time you need help in solving your physical location of the patient's lab, and so on. This should be a real boon to medical records.

And the computer will also be the master mind on the central appointment system. It will immediately show all available openings for any patient wanting to see any doctor. This is a big job, and "showers" won't upset the apple cart. The system is designed so that the medical center will have five or six floors of clinical areas, with numerous nursing stations and doctors' offices.

Data Processing

Continued from page 1

much greater speed and flexibility.

Does this include immediate patient billing?

This will be provided in the new Medical Center, where 360/30 is exchanged for a greater capacity 360/40. Present phone numbers are 360/30, so eventually this will be multiplex search capability, permitting immediate write-out of a patient's bill including all charges for x-ray, lab, and so on.

What else will the electronic brain be assigned?

It will take over the master card file function for Medical Record Service. Basic patient information will be available from this file for instant use by all hospital services. In addition, this will permit the computer to keep track of the physical location of the patient's medical chart whether in a doctor's office, on the floor, in a lab, or somewhere else. This should be a real boon to medical records.

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Computer-Tutor Talk-Back Produces Print-Out Humor

Can a computer talk back? Certainly. It can also touch.

The following unexpurgated "conversation" is reproduced from a section of "computer-tutor" print-out produced by a Scientific Computing Facility computer at the Ahmadi Postgraduate Center in Los Angeles last March. Conventiongoers who played the "game" were posed with a set of symptoms by the computer and asked for their diagnosis. Then the dialogue ended. Programming was done by Chasen C. Collier, MD.

Computer: Third time is the charm. You are right.

Doctor: U R AC R/S.

Computer: How wrong can you get? The PH is 7.45, normal limits are 7.35 to 7.45. Type in your diagnosis.

Doctor: Met. alk. C R/S.

Computer: At last you made it in 6 tries. Try another case. Your patient is a 26 year old post-polio patient who spends most of his time in a respirator who complains of not having ventilation, causing a free CO2 deficit. Note that the PCO2 is 54.5 MM HG. Normal range is 35 to 45. Type in your diagnosis.

Doctor: Respiratory, R/S. Computer: You are still not correct, but you are partly correct. This means you are to maintain a master address list. This is true. We are converting all University addressing into a centralized computer file—employees, addresses, reticles—so forth—all keyed and coded available at high speed on demand for authorized purposes.

How fast is "high speed"?

The printer prints out 600 characters per minute. All departments and services that make demands on the computer may have quite a few. There may also be a terminal 2741 printer for slower, but elite, quality personalized addressing such as is used by development and others.

Appropriately your center will perform services previously done by a variety of agencies, and will provide some remarkable innovations.

Very soon these services will be taken over by the more efficient electronic servant. In fact, its acquisition is only justified on this basis. But, in reality, our vastly increasing demands for information processing of all kinds could hardly be met any other way. Having once made the transformation, new approaches to many problems are possible.

Book Talk

Continued from page 2

tensive study of documents, articles, and books he has that were no longer friends. I felt that would be a tragedy if it happened to us, for John and I are friends.

This volume would be a worthy addition to the shelves of any home, Seventh-day Adventist or otherwise. Not only does Mr. Ford portray this man's love for his country, but very impressively, his love for his God and his fellow man.

BIRTHS

ADAMS, Elois Marie, was born November 7 to Mr. and Mrs. James E. Adams, SMV7.
MasJiet

Wednesday, November 16, 1966

CAMPUS CHAPEL

University Campus

Hour of worship. Pastor Donald G. WHITE. MEMORIAL CHURCH.

Sunday, November 20

HILL CHURCH

"Thanksgiving" program presented by the MV. "These Incredible Times": 8:10 a.m.

Third Dimension": 7:45 p.m.

UNIVERSITY CHURCH

"Man in the Moon."

UNIVERSITY CHURCH Fellowship, film, "Man in the Third Dimension": 7:45 p.m.

"Thanksgiving Day."

Thursday, November 24

UNIVERSITY CHURCH Convocation Monday, October 31. His topics: "The War for the West Indies of Southern California," and "These Incredible Times": 8:10 a.m.

Friday, November 18

UNIVERSITY CHURCH Convocation Monday, October 31. His topics: "The War for the West Indies of Southern California," and "These Incredible Times": 8:10 a.m.

Wednesday, November 23

THANKSGIVING DAY

First Day of Thanksgiving

Monday, November 21

UNIVERSITY CHURCH Convocation Monday, October 31. His topics: "The War for the West Indies of Southern California," and "These Incredible Times": 8:10 a.m.

CARS!

You can do it. Just call us.

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"How to get first class service when buying your car today... and do it without dipping into your savings. We have a complete line of Quality Products at Reasonable Prices. Just call us today and make...and do it without dipping into your savings. We have a complete line of Quality Products at Reasonable Prices. Just call us today and come back to see us again.

UNIVERSITY STORE:

LARGE SIZE

Green Ripe Olives

3 for 89c

Loma Linda Market

Quality Products at Reasonable Prices

STORE HOURS:

SUN - WED. 8 - 7; THURSDAY 8 - 8; FRIDAY 8 - 4

SLOTKIN GIFT BOOKS

SORTING COMPLETED

What happened to the books that Stanley Slotkin, Los Angeles businessman donated to the Loma Linda University library?

According to Alice E. Gregg, assistant librarian, the distribution went like this: Loma Linda University Library kept approximately one-third of the original 60,000 volume donation. Loma Linda University Academy and its associated elementary school received 5,000 books, as did La Sierra College, Riverside.

Another 7,000 went to faculty members and the administration. While San Bernardino Public Library exchanged their stock of books by 5,000. Heritage Garden, a retirement center at Loma Linda, acquired 1,800 of the books, and 250 went to Middle East College, Beirut, Lebanon.

Claremont Seventh-day Adventist Church, Claremont, received 500 books, and approximately 3,500 were sold in bulk to a company. Sports volumes were sold to students. Out of date textbooks numbering 5,000 were discarded.

Biochemist Speaks On 'Fat Control'

U. D. Register, PhD, associate professor of biochemistry, is holding a series of lectures on "Fat Control" at the Angell Hills Seventh-day Adventist Church in Grand Terrace, according to C. Lloyd Wynne, church pastor.

The lecture series began last Monday evening and will continue for the next two successive Sunday evenings. The topic for November 26 is "Shape Things to Come," and for November 27, "Staying in Shape." The meetings begin at 7:30 p.m.

A general hospital employs 241 persons to care for every patient. In 1946, the ratio was 148 employees for every 100 patients.

ON THE COVER

Loma Linda University is looking for new church members and it is offering a 10,000 Mile Tour to anyone who joins. The tour is for a group of 50 and it will take them to nearly every state in the United States.
Non-student or Alumnus? Reserve Yearbook by Nov. 30

**Non-student or Alumnus**? Reserve Yearbook by Nov. 30. Alumnae and other non-students may reserve a copy of the 1967 Loma Linda University yearbook at a cost of $10 each, according to Sandra K. Craig, yearbook editor.

Online reservations for the yearbook must be received by the Publications Office, Loma Linda University, Loma Linda, California 92354, by November 30.

**Please reserve by November 30** to the Publications Office, Loma Linda University, Loma Linda, California 92354.

**Address**

**City**

**State**

**Zip Code**

I understand that I will be billed $10 plus shipping costs for each yearbook.

**Please reserve by November 30 to the Publications Office, Loma Linda University, Loma Linda, California 92354.**

**Purpose:**

Full Roundup to corral and brand top-notch medical students for service in one of the most unique and beautiful areas of the United States, where fellowship is great and opportunity unlimited.

**B. E. Lesh, President**

**J. N. Morgan, Medical Secretary**

University SCOPE, page 6

**Dec. 11-14**

Representatives of five active conferences and the Southwestern Union
Linda Jean Baden, ’66, is currently working on her master’s degree in psychology at Loma Linda University. She and her husband, Kenneth, ’66, have a daughter, Stacey Lynelle, born last year. They reside in Bakersfield, weekdays, teaches psychology at Bakersfield College, and keeps house for her family. Linda feels that the directors of the University Medical Record Service have shown a good deal of respect for the file room and outpatient record department and that she is able to house family for her busy schedule. Dr. Roy Wightman, ’45, is president of the Medical Record Service. Dr. Baden, in response to the file room and outpatient record department of the University Medical Record Service.

Peggy C. Salting, ’66, is head of the medical record department at North Kern General Hospital, Bakersfield, and has been employed in the field of medical record processing for different medical record rooms since January 1966. She plans to continue her higher education and to supervise the incomplete file department at Beverly Hospital, Montebello, for the new 500-bed University Medical Center.

Winter Dental Meet Slated Near Tahoe

The National Association of Dental Auxiliaries has set as the dates for the meet in 1970, the year they will hold their annual winter meeting at Heavenly Valley Camp, Lake Tahoe, according to Daniel R. Badzik, SD, ’62, secretary-treasurer of the American Dental Association in Colorado Springs. Dr. Badzik is visiting the dental school and is exuding pride in her dental school and in the dental school and is exuding pride in her work. She is a nurse at the University Medical Record Service and is a graduate of the University of California at San Francisco.

Scientific Memory Training

It is sad to observe and work on projects that nurses at the University Medical Record Service have shown a great deal of respect for the file room and outpatient record department. Dr. Baden, in response to the file room and outpatient record department of the University Medical Record Service.

Loma Linda Realty And Insurance

SINCE 1936
11112 Anderson St. Loma Linda

WE HAVE RENTALS HOUSES AND APARTMENTS

NOVEMBER 28, 29

FHA financing $16,000.

1 Rdm House — 2 bath — evap cooler — fenced yard — FHA financing $16,000.

2 Houses on Lot — 1 - 2 Rdm & 1 - 1 Rdm house — FHA financing $12,500.

4 — 2 Rdm units on 3 lots has good income, Low down payment.

WE HAVE RENTALS — HOUSES & APARTMENTS

We write Dwelling, Fire, & Auto. Insurance

Loma Linda Memorial Hospital in San Bernardino, California, has recently welcomed a new doctor to its staff: Dr. Jean Baden, ’66, who is a former student of the University of California at San Francisco.

Edward W. Weymouth, ’64, is on the staff of the University Medical Record Service and is a graduate of the University of California at San Francisco. Dr. Weymouth is visiting the dental school and is exuding pride in her dental school and in the dental school and is exuding pride in her work. She is a nurse at the University Medical Record Service and is a graduate of the University of California at San Francisco.

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News from the class of 1966:

Harri J. Hoeben has been nominated by her alma mater, Union College, for inclusion in the 1966 compilation of Outstanding Young Americans. This annual publication honors young women of distinction in the United States. It is sponsored by leaders of national women's organizations, led by honorary chairman Mrs. Lyndon B. Johnson.

Harri is a full-time graduate student now here at the University and plans to receive her master's degree in June. She is doing nutritional research in data of rats.

Patricia A. Black was married to George W. Mutch on August 23 at the Glenisle Valley Drive Church. She and her husband are now in Brookfield, Illinois. She has connected with Hinsdale Sanitarium and Hospital as therapeutic dietitian.

Grace received a graduate award scholarship from Illinois Institute of Technology in Chicago and is working toward a PhD in chemistry.

No need for book markers when you can FINISH your reading assignments in ONE sitting. Now through the DAN/RO SYSTEM of individualized instruction you can cut your reading homework time in half. That means you can increase your speed 100 words per minute! At course completion our average student increases reading comprehension 50% to 100%.

No, you are not too busy... you can't afford not to attend this free demonstration entitled "Developing Your Vital, Latent Potential." (A free rating test is available on request.)

Free Demonstrations: Thursday, Nov. 17, 7 p.m. Griggs Hall, Room 2-B. Friday, Nov. 18, 8 a.m. and 12 noon. Griggs Hall, Room 1-A.

IBM
North American Aviation
Mr. Smith, Hospital in New York City

Roosevelt Hospital in New York City

Penn State College

Some DAN/RO Clients

Most Colle: State Hospitals
University of Redlands

Scripps College

San Diego State College

Munsey Bay Academy

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If you cannot attend— for further information please call (714) 323-5770.

Serving Colleges and Industry for Over A Decade

Alumni News

250 Barrington St.
Boston, Massachusetts 02108

If you cannot attend— for further information please call (714) 323-5770.

Serving Colleges and Industry for Over A Decade

Dr. C. R. Collier, MD, chairman of the department of physiology and biochemistry; and D. Heekin, MD, assistant professor of physiology and biochemistry; and A. Computer, speaker's assistant, attended the Western Tubercolosis Conference in Denver, Colorado, September 15 and 16.

The three participants traveled by plane. En route, the 150-passenger analog computer met between the two men with its sear belt carefully fastened. It had part full face under its "A, Computer," and had a baggage allowance of its own which it used for a few of its extra parts.

The computer was used in a lecture given by Dr. Collier and Dr. Hackney, "Medical Education and Application." The lecture demonstrated the use of computers in teaching medical students.

Total payroll expense of hospitals in 1963 reached $7.3 billion, according for 66.3 percent of the total $11 billion exp

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