

# SIXTEENTH ANNUAL ALUMNI SEMINAR - SATURDAY, APRIL 11, 1953

**8:30-9:15 A.M.—REGISTRATION**

**Dabney Hall of the Humanities**

## MORNING PROGRAM

**9:30 to 10:20 A.M.**

Your choice of the following:

### A. THE ARVIN-TEHACHAPI AND BAKERSFIELD EARTHQUAKES

*John P. Buwalda, Professor of Geology.*

Not since 1857 has southern California experienced a series of shocks as strong as those occurring last summer in the San Joaquin Valley. Every modern device and technique were used for the subsequent vigorous geologic, seismic, and geodetic investigations. Now it is possible to summarize the up-to-date engineering knowledge accumulated and describe the unique geologic features observed.

### B. THE GYROSCOPE

*Leverett Davis, Jr., Professor of Theoretical Physics*

Nearly everyone is familiar with the top, a simple form of gyroscope or rigid rotating body. The many ways in which the basic physical principles underlying the behavior of the rotating rigid body enter into our everyday life are rarely noticed, however. Dr. Davis will demonstrate the use of the gyroscope in artificial horizons, ship stabilizers, gyrocompasses, and monorail railroads.

**10:20 to 10:50 A.M. COFFEE TIME**

**10:50 to 11:40 A.M.**

Your choice of the following:

### A. THE MODERN LOGIC

*E. T. Bell, Professor of Mathematics.*

Over the past 100 years a new logic has developed. This logic is quite different from the classic type known to Aristotle. Much of the superiority of the new logic over the old is due to the extensive use of symbolism. Dr. Bell will discuss the development of this logic, and show its usefulness in the solution of today's problems.

### B. THE ATOMIC STRUCTURE OF ALLOYS

*Gunnar Bergman, Assistant Professor of Mechanical Engineering and Chemistry.*

What is a crystal? How are crystals arranged to form the structure of metals and alloys? Dr. Bergman will discuss the crystalline structure of solid solutions, intermetallic compounds, and the metallic elements.

**11:55 to 12:45 P.M.**

Your choice of the following:

### A. FAREWELL TO THE HORSELESS CARRIAGE or The Whys and What-Fors of Automatic Transmissions

*Peter Kyropoulos, Associate Professor of Mechanical Engineering.*

For years we have been designing automotive power plants and transmissions separately and have "cobbled" them together as individual shelf items. This has clearly led us to a situation where the transmission-engine combination leaves much to be desired. The discussion will include an analysis of why the hydrodynamic transmission behaves the way it does, and what its limitations and capabilities are.

### B. WE'RE MEETING THE VIRUS PROBLEM

*Renato Dulbecco, Associate Professor of Biology.*

Unknown to you, there has been a revolution in the ways of investigating the field of animal viruses. Time-consuming and

inaccurate techniques are being discarded for precise and speedy methods of investigation. Diseases of exceptional social and economic significance are well on the way to control as a result of the new approach to investigation.

**1:00 to 2:00 P.M. LUNCH—STUDENT HOUSES**

## AFTERNOON PROGRAM

**2:30 to 3:20 P.M.**

### LIGHT, THE TIME MISER

*Richard D. Feynman, Professor of Theoretical Physics.*

Of all the time-saving gadgets invented by man, none will ever compete with light, the most cunning of all time-savers. This miser, whether travelling through space, vapor, liquid, or solid always takes the least time-consuming route. The precision surface of the 200-inch telescope mirror, the brilliance of the diamond, and the colors in the rainbow are results of light's time-saving behavior in its travel. A dynamic speaker modernizes and simplifies some of the old standby formulas.

**3:30 to 4:20 P.M.**

### OPERATION FISH, A BOUT WITH A TROUT

*William W. Michael, Associate Professor of Civil Engineering.*

While most people regard fishing as only a sport, Professor Michael considers it a physical problem, and approaches the problem scientifically. As a result, he has probably caught more trout than any man alive, and is considered by sportsmen to be one of the country's leading experts on trout fishing. With the aid of slides and colored movies, Prof. Michael will relate some of his experiences, some of the scientific methods he uses, and possibly some of his secrets.

**4:30 to 5:00 P.M.**

### GROUND-BREAKING CEREMONIES— NEW SWIMMING POOL

All alumni will appreciate this brief ceremony formally initiating the construction phase of the new swimming pool. The years of collection drives accompanied by generous contributions by the Alumni are now very close to the goal. Dr. DuBridge will describe the building program.

**5:00 to 6:30 P.M. SOCIAL HOUR**

Relax and meet your friends at the Elks Club, 400 West Colorado Street, Pasadena. Cocktails available. Dinner will be served at 6:30 in the club banquet room.

## EVENING PROGRAM

**6:30 P.M. DINNER**

Elks Club—400 West Colorado Street, Pasadena

Dress—Informal for men and women.

**AFTER DINNER**

*Introductions by John E. Sherborne, Alumni Association President.  
Remarks by Dr. Lee A. DuBridge, President of California Institute of Technology.*

### ECONOMIC CHANGES AND THE NEW ADMINISTRATION

*Robert R. Dockson, Economist, Bank of America.*

Our production facilities have been greatly expanded to meet the demands of the defense program and maintain a high standard of living. Within the next year Federal government expenditures are slated to taper off. What are the prospects for the American economy at this time? What are the inflationary and deflationary forces at work in the economy today, and how is the new administration strengthening or weakening these forces?