

Department of Civil Engineering  
University of California at  
Berkeley

The First One Hundred Years  
(or so)

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# University Established - 1868

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- ◆ Charter provided for Colleges of:
  - Agriculture
  - Letters
  - Chemistry
  - **CIVIL ENGINEERING**
  - Mining
  - Mechanics

# College of Civil Engineering

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- ◆ Established 1872
- ◆ Head: Frank Soule
  - Dean of College - 1896 - 1907
- ◆ Civil Engineering Building located just east of existing Campbell Hall

# Early CE Faculty Member

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## ◆ Frank Soule

- Graduate of West Point

# Civil Engineering Building (1925)

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# Mechanics Building

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## ◆ Hydraulics Laboratory



# Engineering Materials Laboratory (EML, Circa 1931)

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# Current Locations

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- ◆ Engineering Building/McLaughlin Hall
  - Circa 1931
- ◆ O'Brien Hall
  - Late 1950's
- ◆ Davis Hall
  - 1969



# College of Mechanics

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- ◆ Established 1878
- ◆ Dean: Frederick G. Hesse
- ◆ Hesse Hall

# Civil Engineering Faculty

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## ◆ Hired prior to 1930

- C. Derleth	1903-1944	41 years
- C.G. Hyde	1905-1944	39
- B.A. Etcheverry	1905-1950	45
- F.S. Foote	1912-1954	42
- S.T. Harding	1914-1949	35
- C.T. Wiskocil	1914-1952*	38

\*Deceased before retiring.

# Civil Engineering Faculty

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## ◆ Hired prior to 1930 (cont)

- W. Langlier	1916-1956	40 years
- R.E. Davis	1920-1952	32
- B. Jameyson	1920-1956	36
- G.E. Troxell	1920-1963	43
- H. E. Davis	1930-1973	43

# Civil Engineering Faculty

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## ◆ Some since 1930

- H.D. Eberhart Structures
- E.P. Popov Structures / Mechanics
- T.Y. Lin Structures (bridges)
- R.W. Clough Structures
- A.C. Scordelis Structures
- J.W. Johnson Hydraulics/Coastal
- H.A. Einstein Hydraulics
- R.L. Wiegel Hydraulics/Coastal

# Civil Engineering Faculty

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## ◆ Some since 1930 (cont)

- B. Bresler Structures / Materials
- K.S. Pister Structures / Mechanics
- H.B. Seed Soil Mechanics
- F. Baron Structures (Bridges & Blgs.)
- J. Raphael Structures (Dams)
- J. Penzien Structures
- J.K. Mitchell Soil Mechanics
- E.L. Wilson Structures

# Civil Engineering Faculty

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## ◆ Some since 1930 (cont)

- B. Gotaas Sanitary Engineering
- E. A. Pearson Sanitary Engineering
- R. Goodman Rock Mechanics
- K. Crandall Construction Mgmt
- B. C Gerwick, Jr. Heavy Constuction
- R. A. Moyer Highway Engineering
- D. S. Berry Traffic Engineering

# Civil Engineering Faculty

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## ◆ Some since 1930 (cont)

- F. H. Moffitt      Surv. & Photogrammetry
- W. N. Kennedy      Transportation
- R. Horonjeff      Airport Engineering
- A. D. May      Traffic Engineering
- G. F. Newell      Transportation
- B. A. Vallerga      Asphalt Technology

# Civil Engineering Faculty

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## ◆ Some since 1930

- W. Kaufman Sanitary Engineering
- W.J Oswald Sanitary Engineering
- W. G. Godden Structures
- J. F. Thomas Sanitary Engineering
- W. L. Garrison Transportation Planning
- C. L. Monismith Pavement Engineering
- V. Bertero Structures



# Civil Engineering Faculty

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## ◆ Some since 1930 (cont.)

- J. Sackman                      Structural Mechanics
- W.G. Godden                   Structures
- J. Lubliner                     Structural Mechanics
- R.L. Taylor                     Structural Mechanics
- D. Jenkins                      Sanitary
- J. Kelly                         Structural Mechanics
- H. Fisher                        Hydraulics
- J.M. Duncan                    Soil Mechanics
- J. Lysmer                        Soil Dynamics

# Civil Engineering Faculty

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## ◆ Some since 1930 (cont.)

- J. Anderson      Surv. & Photogrammetry
- A.J. Horne      Sanitary
- R. B. Williamson      Structural Materials
- A. Kanafani      Transportation
- A. Der Kiureghian      Reliability/Risk

# Program Evolution

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1929 - 1931

College of Civil  
Engineering

College of  
Mechanics

*merged*

College of Engineering

# College of Engineering

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## ◆ Prof C. Derleth

- Dean of CE 1907 - 1929

- Dean of CoE 1929 - 1942

◆ Regent McLaughlin 1942 -  
1943

◆ Prof M.P. O'Brien 1943 -  
1959

# Programs

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- ◆ First BS degree in Civil Engineering  
1873
- ◆ First MS degree in Engineering  
1896
- ◆ First PhD degree in Engineering 1894

# Programs (cont)

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- ◆ Engineering Council for Professional Development (now ABET)
  - created in 1932
  - UC accredited in 1936

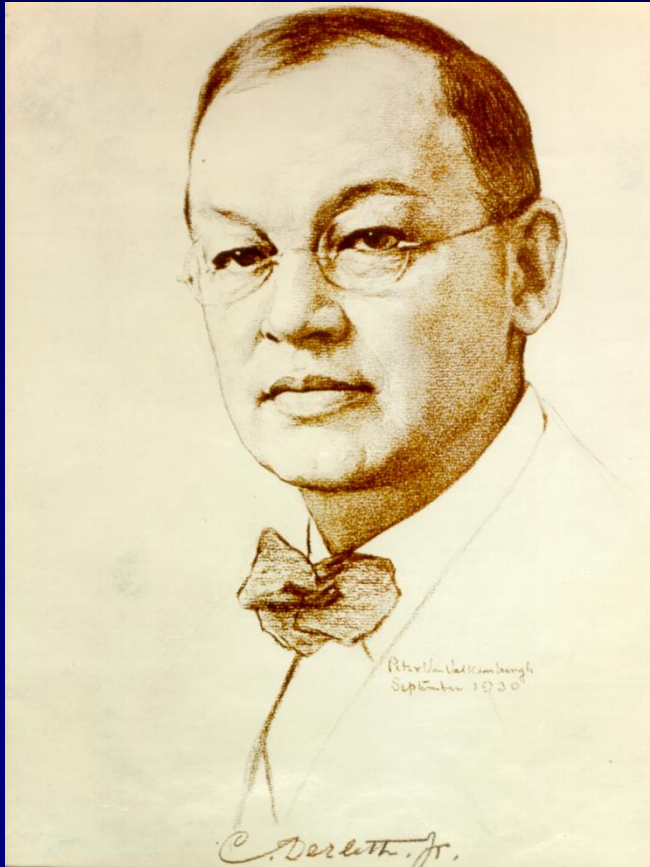
# Programs (cont)

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- ◆ M.S., Ph.D, and D. Eng. Almost from outset
- ◆ Graduate programs significantly expanded in 1950's
- ◆ 2 yr. M. Eng. Program introduced in 1972

# Charles Derleth

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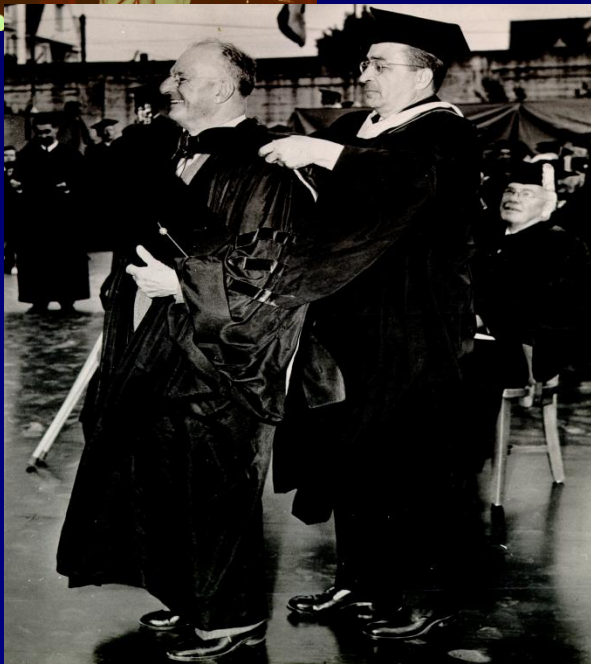


- ◆ Buildings, San Francisco (post-1906 Quake)
- ◆ Carquinez Bridge
- ◆ San Francisco-Oakland Bay Bridge
- ◆ Golden Gate Bridge



# Charles Gilman Hyde

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- ◆ "Father" of Sanitary Engineering in Western U.S.
- ◆ Water and Sewage Treatment
  - plant design

# B. A. Etcheverry (Etcheverry Hall)

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- ◆ Irrigation Engineering
- ◆ Yolo by-pass
  - Sacramento River

# F. S. Foote

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- ◆ Railroad Engineering

# S. T. Harding

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- ◆ Irrigation Engineering
  - legal aspects

# C. T. Wiskocil

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- ◆ Materials
- ◆ Professionalism

# W. Langlier

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- ◆ Applications of chemistry to Sanitary Engineering problems
- ◆ e.g., Chemical dosing of water
  - disinfection
  - clarification
  - softening

# R. E. Davis (Davis Hall)

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- ◆ Materials Laboratory (Structural Testing)
- ◆ Cement and Concrete
  - Boulder Dam
  - Bonneville Dam
- ◆ San Francisco-Oakland Bay Bridge
  - riveted joints
- ◆ Golden Gate Bridge Saddles

# B. Jameyson

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- ◆ Posey Tube
- ◆ Bridges
  - Oakland/Alameda
  - Alameda County



# H. E. Davis

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Transportation

Administration

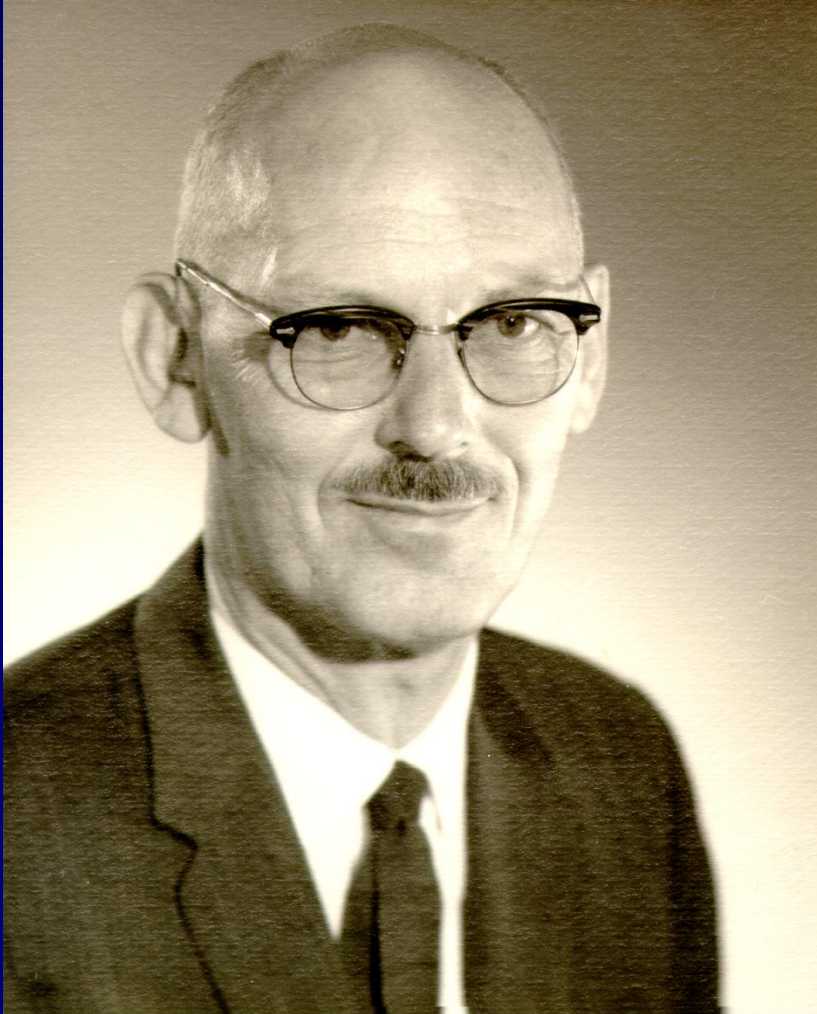
Economics

Finance

Policy

# H. Eberhart

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- ◆ Structures
- ◆ Prosthetic Devices
  - Start of bio-engineering

# M. P. O'Brien

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- ◆ Coastal Engineering  
(considered "Father" of Coastal Engineering)

# J. W. Johnson

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◆ Coastal  
Engineering

# H. A. Einstein

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## ◆ Sediment Transport

# E. P. Popov

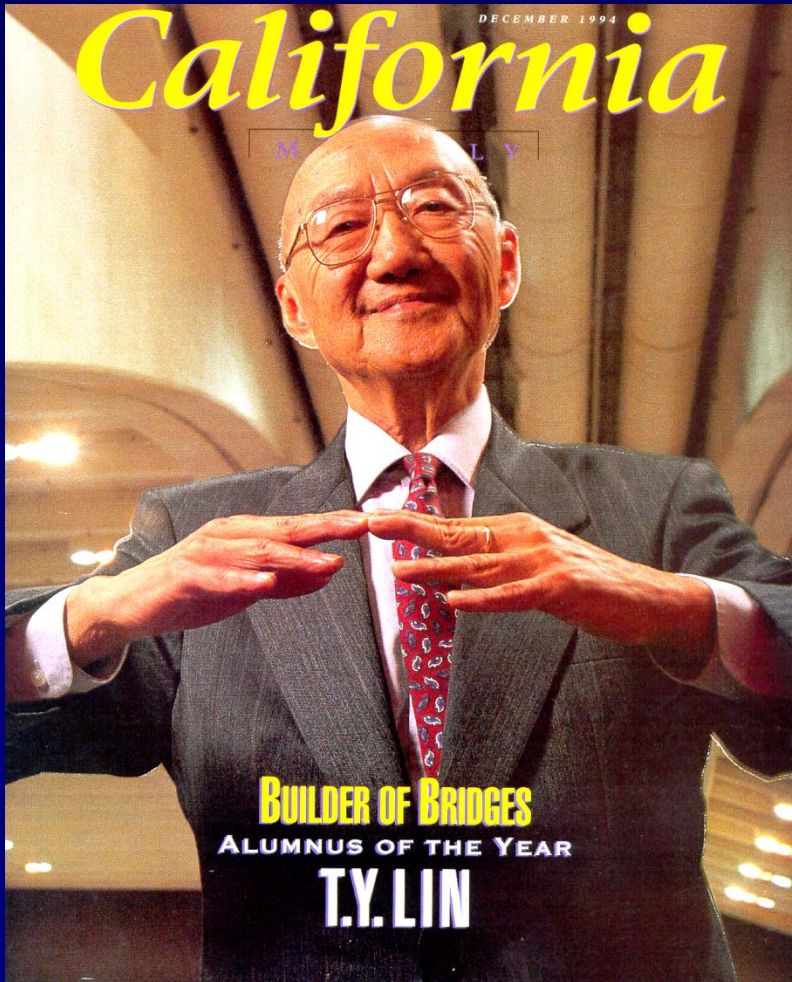
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- ◆ Engineering Mechanics
- ◆ Structural Engineering

# T. Y. Lin

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- ◆ Prestressed Concrete
- ◆ Bridge Engineering

# B. Bresler

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- ◆ Structural Engineering
  - Concrete behavior
  - Aircraft structures



# M. Polivka

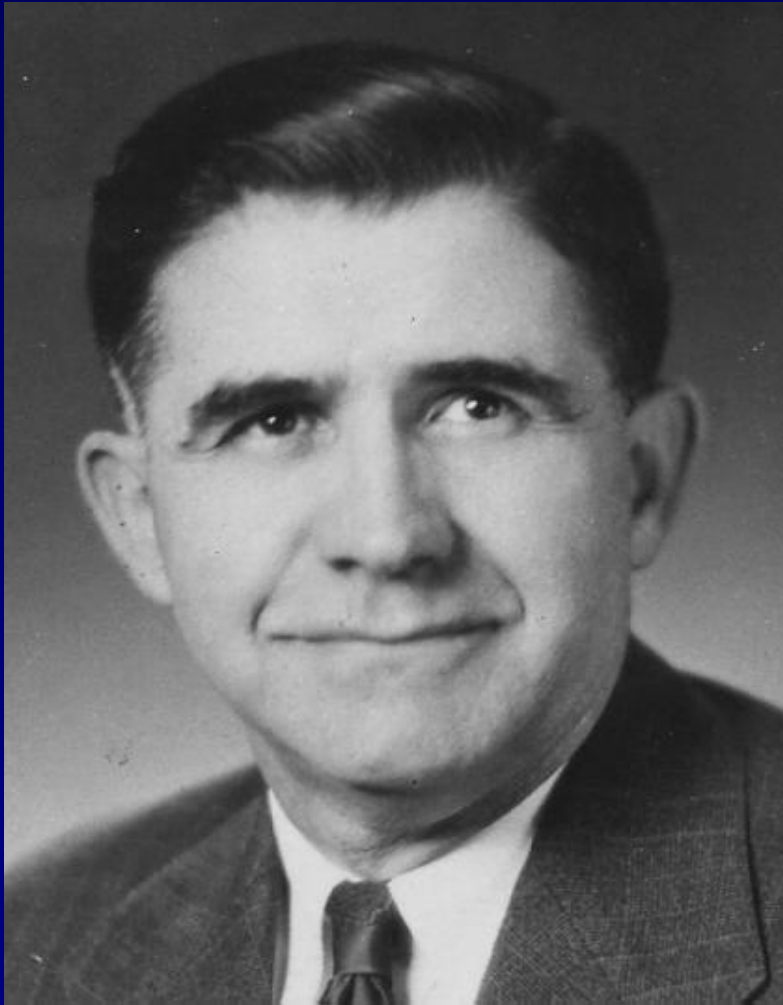
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## ◆ Structural Materials

# R. A. Moyer

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**Highway Engineering**  
Economics (including  
vehicle operating costs)  
Skid Resistance  
Other road surface  
characteristics

# D. S. Berry

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Traffic  
Engineering

# R. W. Clough

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- ◆ Earthquake Engineering
- ◆ Finite element methodology (one of the first to develop this approach for the solution of Civil Engineering problems)

# B. A. Vallerga

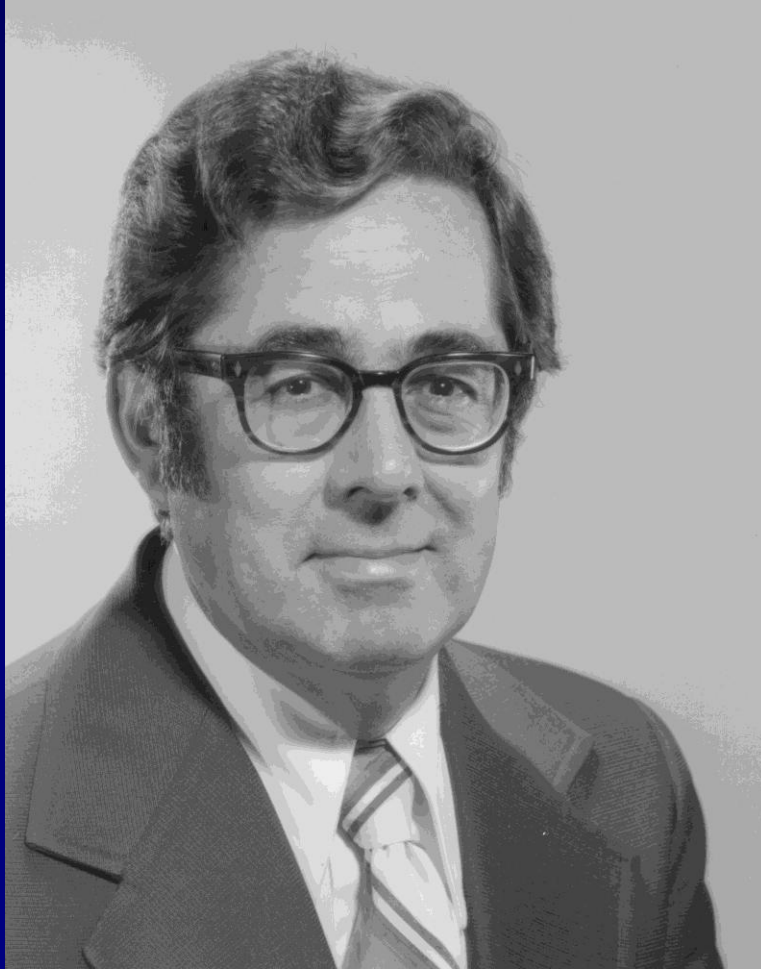
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**Asphalts**  
**Asphalt Mixes**

# A.C. Scordelis

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◆ Structural  
Engineering

# E.A. Pearson

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◆ Sanitary  
Engineering

# W. J. Kaufman

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◆ Sanitary Engineering



# J.W. Thomas

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◆ Sanitary  
Engineering

# K.S. Pister

---



◆ Structural  
Mechanics

# R. Horonjeff

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- **Transportation**
  - Exit Taxiways
  - Runway Lighting
  - Airport Capacity

# D.W. Finch

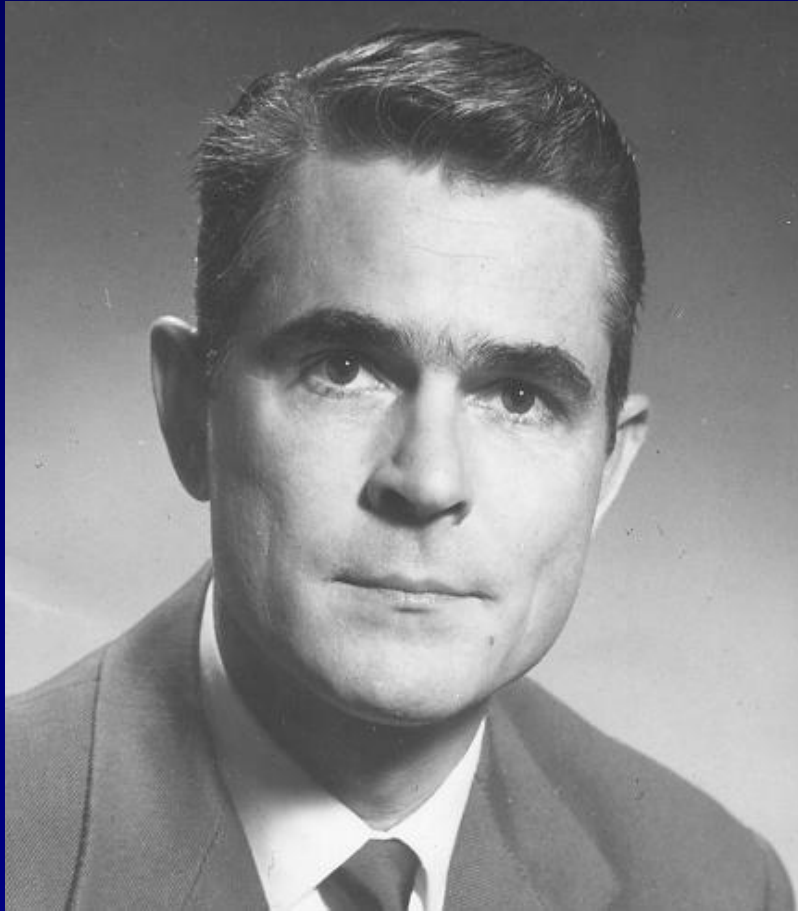
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- ◆ **Transportation**
  - Lighting

# F. H. Moffitt

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Surveying  
Photogrammetry

# H. B. Seed

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Strength and  
Deformation  
Characterization of  
Compacted Clay  
Repeated Load  
Response of Soils and  
Granular Materials  
Liquefaction of  
Fine-Grained Soils

# R. L. Wiegel

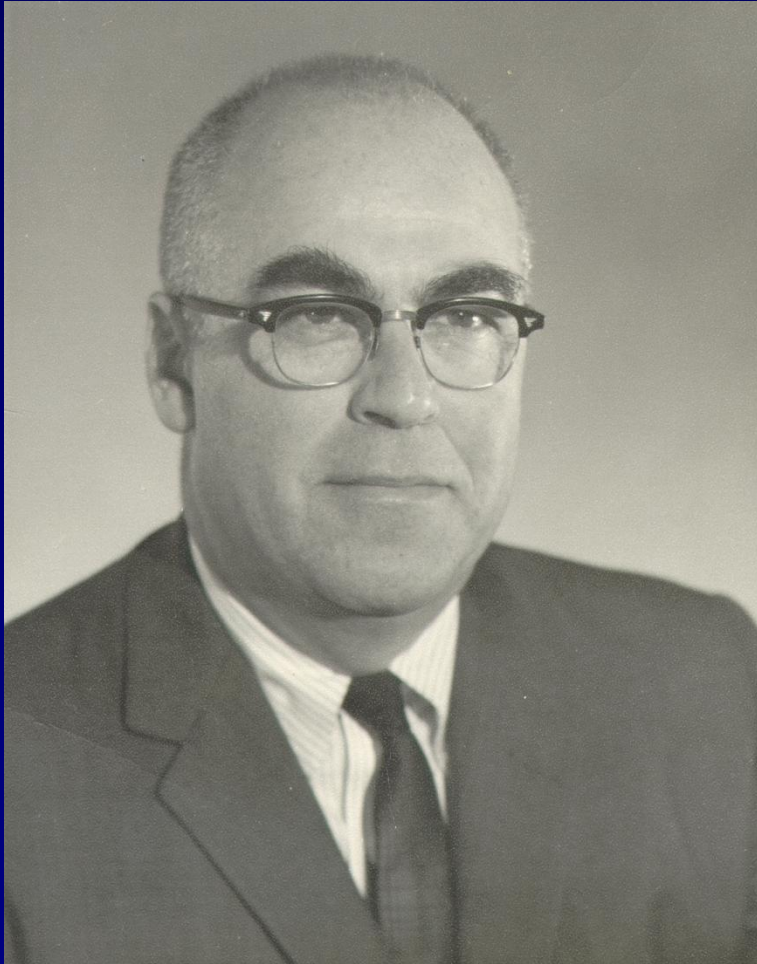
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◆ Coastal  
Engineering

# J. M. Raphael

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## ◆ Dam Design

- Shasta
- Folsom



# F. Baron

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## ◆ Structural Engineering

- Buildings

  - » *St. Mary's Cathedral*

- Bridges

  - » *Dumbarton Bridge*

  - » *Golden Gate Bridge*

# J.W. Penzien

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◆ Structural  
Engineering

# W. N. Kennedy

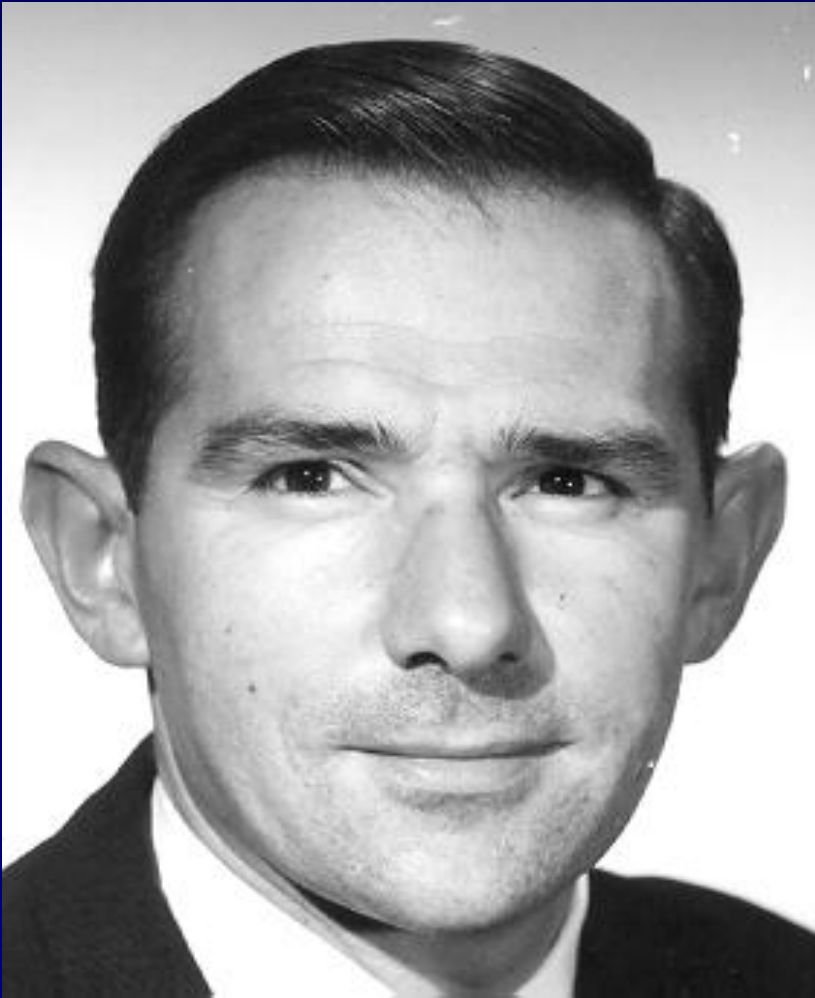
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Traffic  
Engineering  
Urban  
Transportation

# C. L. Monismith

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Pavement Design and  
Rehabilitation  
Asphalt Technology

# V Bertero

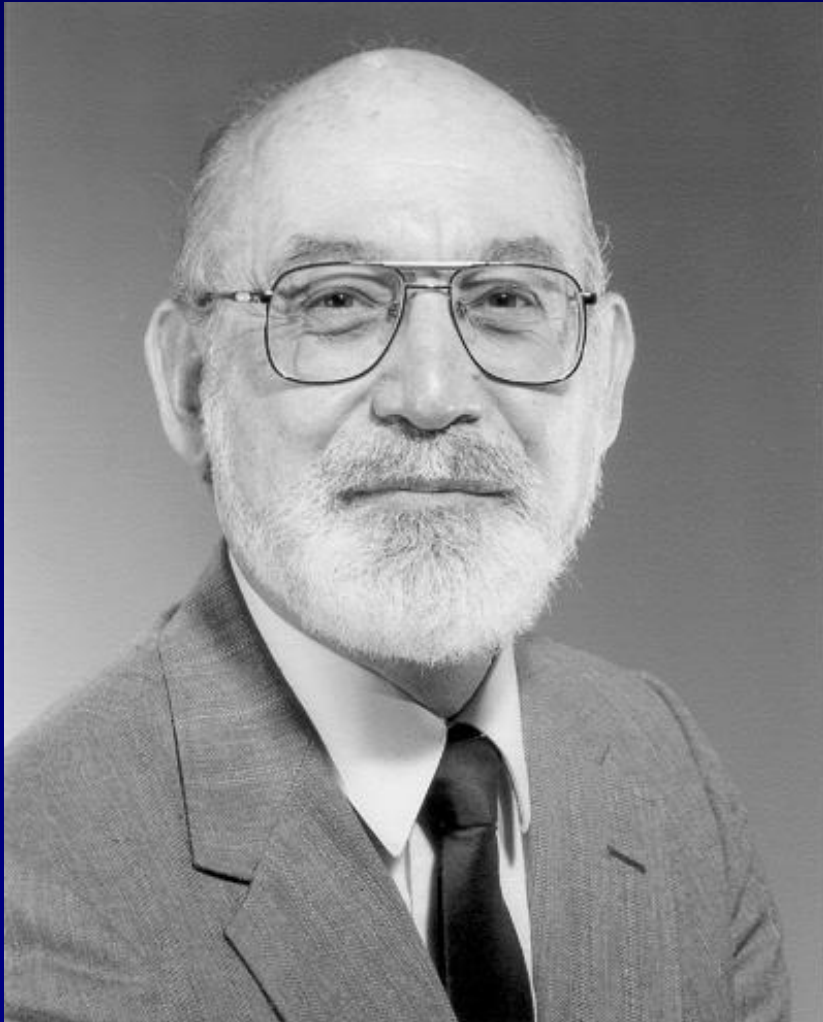
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◆ Structural  
Engineering

# J.W. Sackman

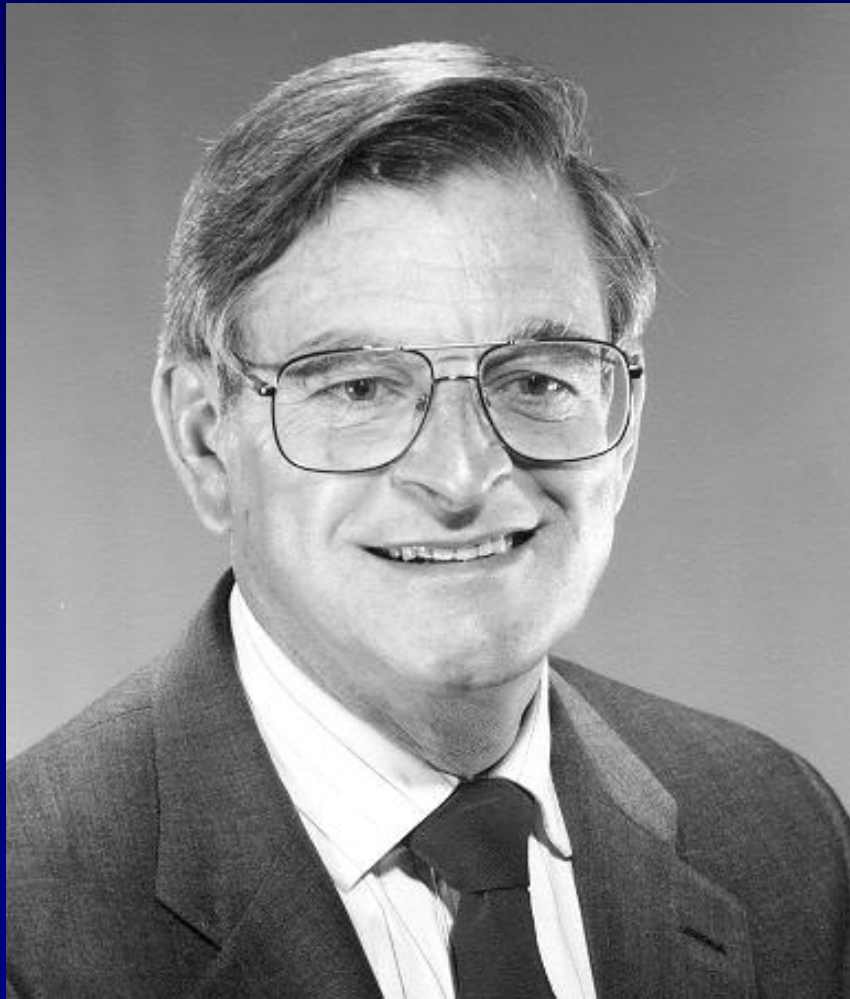
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◆ Structural Mechanics

# J. K. Mitchell

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Physico-Chemical  
Properties of Soils  
Soil-Stabilization with  
Portland Cement,  
Lime, and  
Lime-Flyash

# W.G. Godden

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◆ Structural  
Engineering



# W.J. Oswald

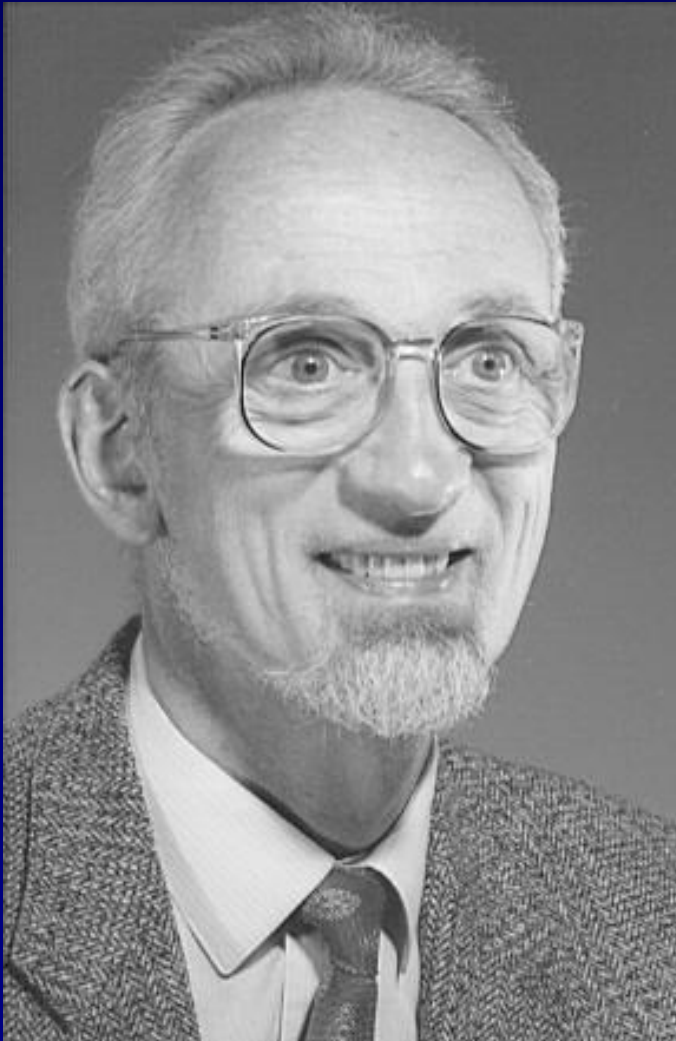
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- ◆ Sanitary Engineering, algae symbiosis

# D. Jenkins

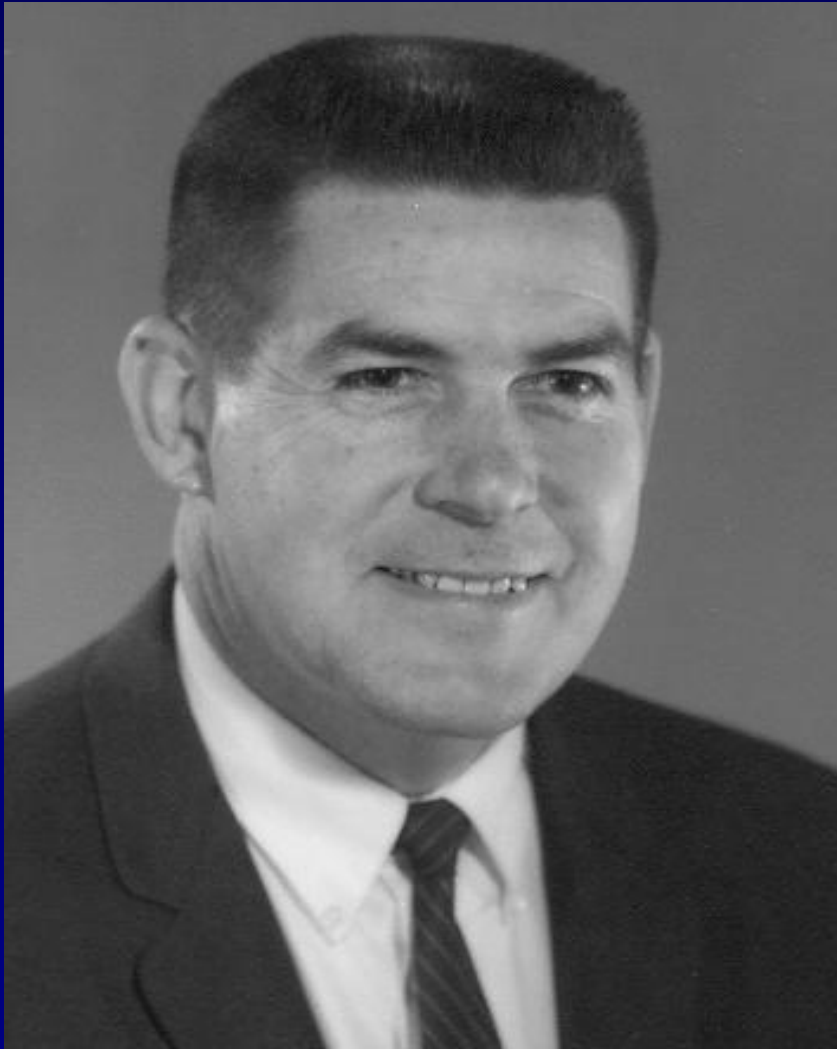
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- ◆ Sanitary Engineering

# A. D. May

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Traffic Operations  
Control  
Simulations

# G. F. Newell

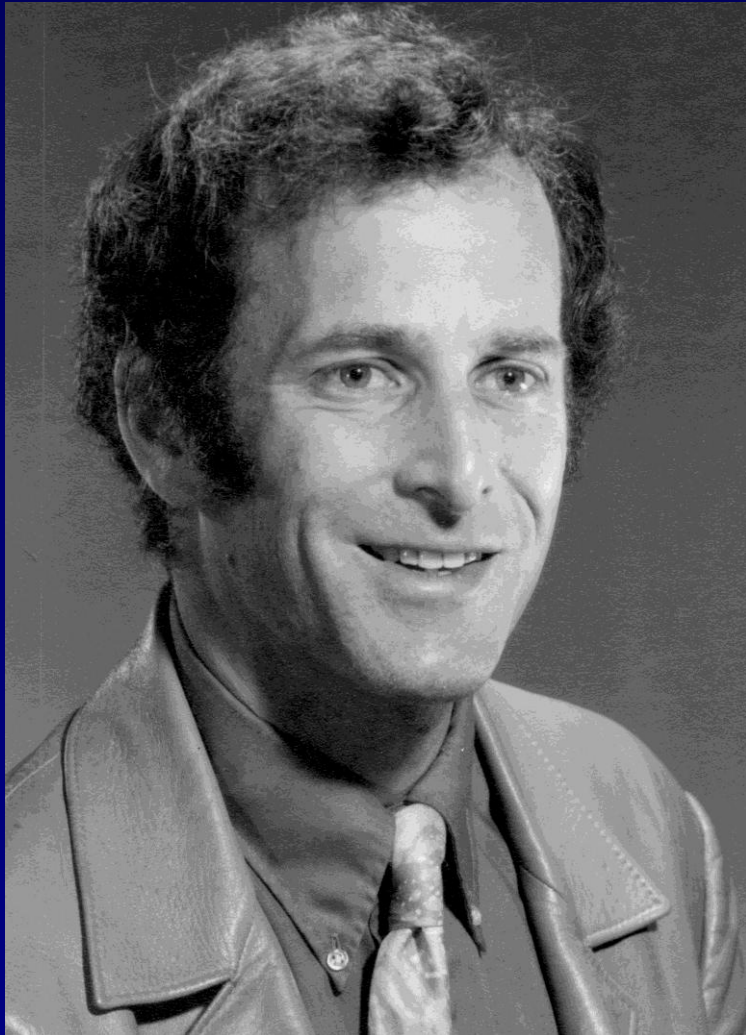
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Traffic Flow Theory  
Queueing

# R.E. Goodman

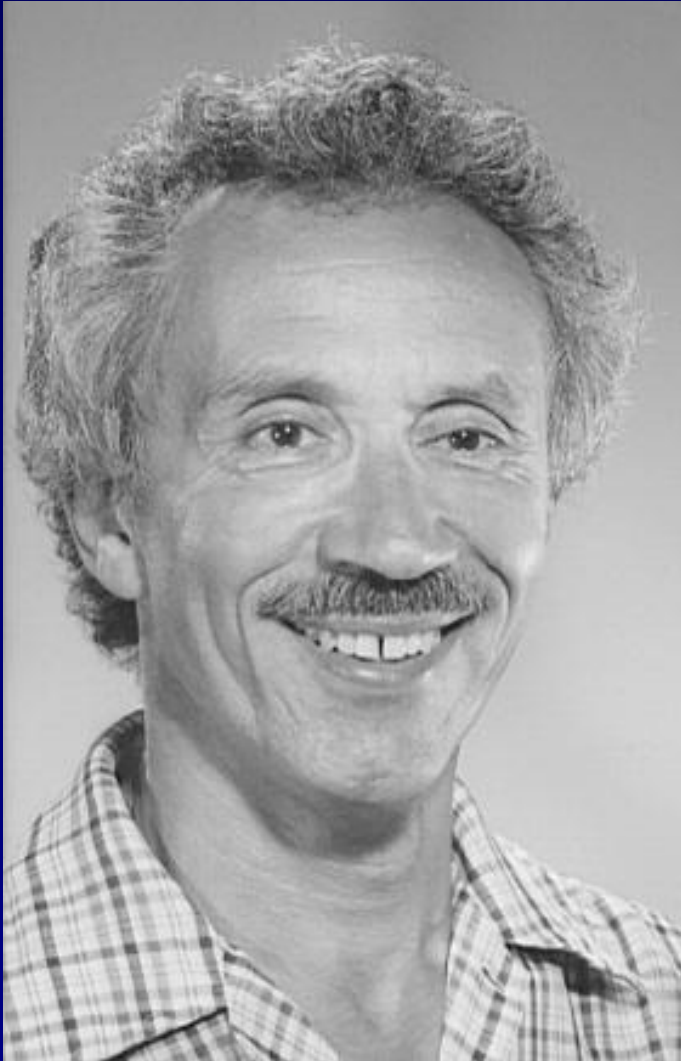
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Geological  
Engineering  
Rock Mechanics  
also  
Musician and  
Opera Singer

# J. Lubliner

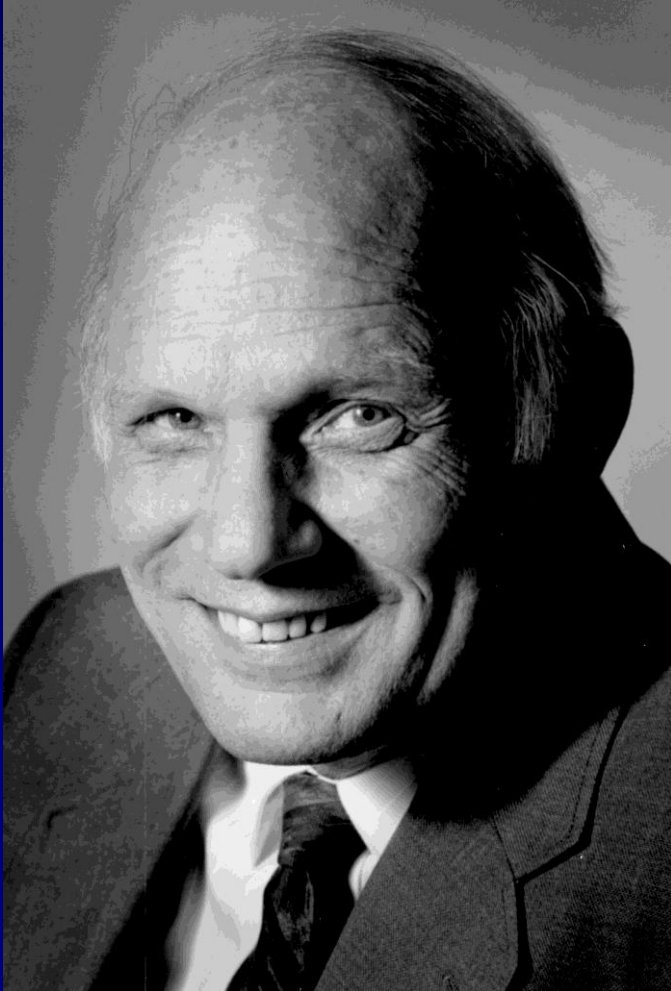
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- ◆ Structural Mechanics

# R.L. Taylor

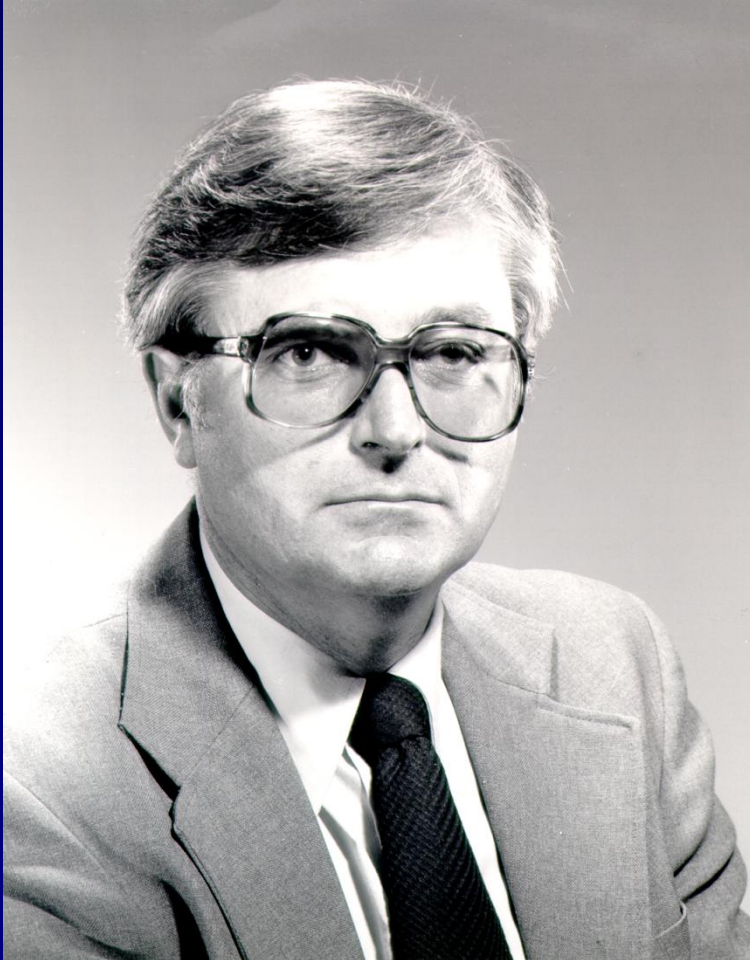
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◆ Structural  
Mechanics

# E. L. Wilson

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- ◆ Finite element analysis



# J.M. Kelly

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- ◆ Structural Mechanics; earthquake engineering - base isolation.

# J.M. (Mike) Duncan

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- ◆ Soil Mechanics
- ◆ Flow nets
- ◆ Slope Stability

# J. Lysmer

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- ◆ Dynamic analysis of soil structures
  - earthquake engineering

# T. Brekke

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- ◆ Geological Engineering Tunneling

# A. K. Chopra

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◆ Structures

# J. Anderson

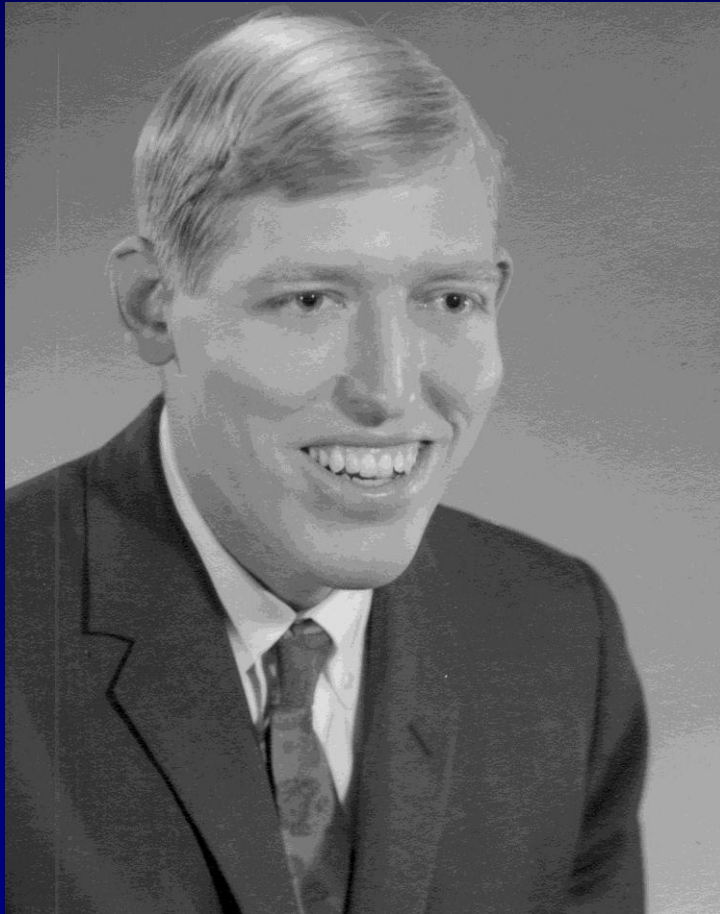
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- ◆ Surveying and Photogrammetry

# H. Fisher

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◆ Hydraulics

# K.C. Crandall

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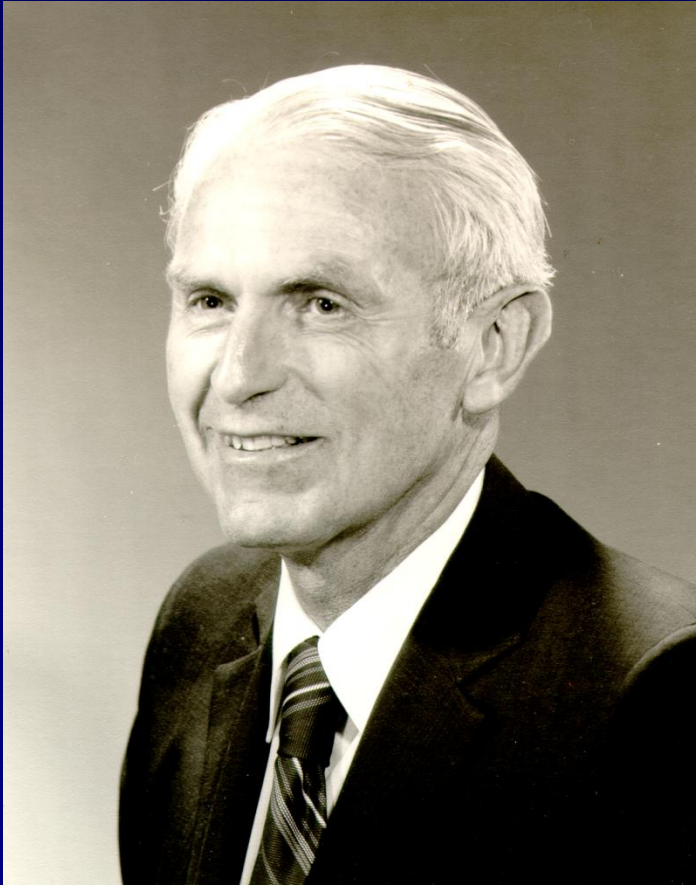


◆ Construction  
management



# B. C. Gerwick

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- ◆ Richmond-San Rafael Bridge
  - foundation
- ◆ Oil Drilling Structures
  - North Sea
  - Bass Strait - Australia

# A.J. Horne

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- ◆ Sanitary Engineering

# R. B. Williamson

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- ◆ Structural Materials
  - Fire Protection Engineering

# A. Kanafani

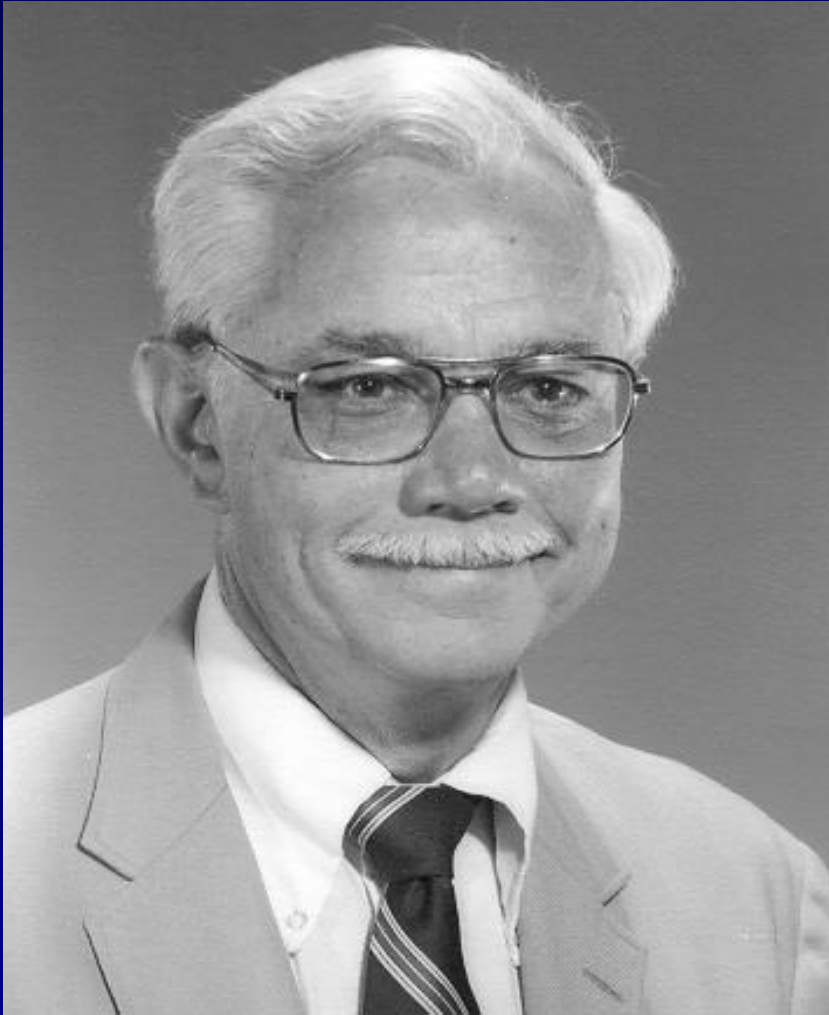
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- ◆ Transportation Engineering
  - Air Transport

# W. L. Garrison

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Transportation  
Planning  
Freight Transport

# A. Der Kiureghian

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- ◆ Structures
  - Risk Analysis

# Graduates of Program

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- ◆ Robert Gordon Sproul, 1912
  - President, University 1930-1958
- ◆ Presidents of ASCE
  - Walter Huber (CE 1905)
  - John Rinne (CE 1931)
  - Irving Mendenhall (CE 1941)
  - Richard Karn (CE 1950)
  - James McCarthy (CE 1947)

# Graduates of Program (cont)

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- ◆ Presidents of PG and E
- ◆ Public Works Officials
- ◆ Consulting Engineers



# Summary

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## ◆ Faculty

- teaching, research, practice
- adjustment to changes

## ◆ Students

# Summary (cont)

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- ◆ Traditions
- ◆ Adaptability
- ◆ Continuous professional development