

A BRIEF HISTORY OF THE NORTHERN CALIFORNIA SECTION OF THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS

Raymond A. Mugele (ca. 1992)

Manesh J. Shah (1999)

Emmett R. Miller (2009)

How We Got Started

In the early 1940's, many chemical engineers were working in the San Francisco Bay area, in research, development, engineering, production, and other activities. To some of these engineers it seemed desirable to communicate with others and to meet new colleagues outside of their own departments and offices. With this in mind, Charles R. Nelson and Mott Souders, Jr. called a meeting to be held on September 29, 1944, to discuss the organization of a local section of the American Institute of Chemical Engineers. Fifty-one members attended this meeting, drew up by-laws, and appointed a nominating committee. On October 24, 1944, a business meeting was held to organize the Northern California Group of Chemical Engineers by adopting the proposed by-laws and electing as officers:

- Chairman Charles R. Nelson
- Vice-Chairman O.J. Chinnock
- Secretary-Treasurer Mott Souders, Jr.
- Executive Committee: G.C. Jester, G.H. Hemmen, A.C. Stern, R.S. Trouton

After a probationary period to establish continuity of interest, this group was formally accepted as the Northern California Section of the American Institute of Chemical Engineers. This happened at a meeting of the Council of the Institute in December, 1945, when the Institute had but nineteen previous local sections. During the probationary period, fourteen meetings were held, with an average attendance of eighty and a total membership of one hundred.

Highlights of the Section's Development

In the late '40s and the '50s, NorCal operated very much like the other Sections of AIChE., with monthly meetings, occasional social events, and cooperation with National AIChE such as the hosting of National/Annual meetings. In the '60s, some special ventures were undertaken, such as addition of a subsection, establishment of student awards, and institution of a new (one-day) symposium. In the '70s, '80s and '90s the activities started in previous decades were extended. More activity was provided in career guidance. The by-laws were amended, new committees formed and expanded. In the late '80s, a new section was formed from a portion of NorCal's geographical area, only to be reabsorbed into NorCal a few years later as a second subsection. Now in the new millennium, we also emphasize external relations, as with schools, legislative councils, the media, and government bureaus.

Here are a few of our significant mileposts:

- 1946 Section began operating as a part of National A.I.Ch.E.

- ca. 1949 NorCal joined with other engineering disciplines as a member of a Sacramento based organization called the California Legislative Council for Professional Engineers. CLCPE's mandates include pro-bono support to the Legislature on technical/scientific/engineering matters and overseeing legislation related to the California Engineers Act and the profession.
- 1956 Chernineers (spouses auxiliary) founded. This vibrant support group continued until the early 1980's, when it had become increasingly difficult to distinguish a spouse from an engineer by gender.
- ca. 1960 NorCal College Awards established.
- 1962 Annual One-Day Symposium founded.
- 1962 South Bay Subsection founded.
- 1975 Mott Souders High School Scholarships founded.
- 1982 NorCal Section Professional Progress Award established.
- 1985 Randall D. Sheeline Scholarship Fund established.
- 1987 Articles of Incorporation filed with State
- 1991 Sacramento/Sierra Section formed incorporating the outlying counties of NorCal Section.
- 1995 Raymond A. Mugele Scholarship Fund established.
- 1995 Chemical Engineering Excellence Awards established.
- 2000 Sacramento/Sierra Section dissolved and reabsorbed into NorCal as its Sierra Subsection.
- 1946 – present AIChE meetings are held periodically in the geographical jurisdiction of one of its Local Sections. Such meetings are hosted and staffed by that Section, which generally provides the General Arrangements Chair (GAC) and (at times) the Meeting Program Chair (MPC). AIChE meetings that have been hosted by NorCal, with GAC and MPC (as known) are:

- 1946 San Francisco Regional Meeting
- 1953 San Francisco California Meeting
- 1959 52nd Annual Meeting
- 1965 56th National Meeting - J.F. Valle-Riestra (GAC), E.B. Chiswell (MPC)
- 1971 64th Annual Meeting – T. Breitmayer (GAC), E.M. Blue (MPC)
- 1974 Conference on Hazardous Material Spills
- 1975 15th National Heat Transfer Conference
- 1979 72nd Annual Meeting – R.A. Mugele (GAC), C.J. King (MPC)
- 1984 77th Annual Meeting – J.M. Fox III (GAC), J.F. Valle-Riestra (MPC)
- 1989 82nd Annual Meeting – E.R. Miller (GAC), J.P. O'Connell (MPC)
- 1994 87th Annual Meeting – T.T. Cheung (GAC)

- 2001 94th Annual Meeting (Reno) – H. Amin (GAC)
- 2003 96th Annual Meeting – D.K. Spencer (GAC)
- 2006 99th Annual Meeting – C.L. Murphy (GAC)
- 2013 106th Annual Meeting – B.V. Yeh (GAC), C. Cooper (co-MPC)
- 2016 109th Annual Meeting – D. Alkaya (GAC), L. Li (co-MPC)

The South Bay Subsection

During the course of development of NorCal, a number of additions (and one subtraction) have occurred. One of the additions was the South Bay Subsection. In the 1960's, some concentrations of chemical engineers were found outside the San Francisco Bay Area (e.g., in the vicinity of Reno, Davis, San Jose, and Palo Alto). The only area inhabited by enough members to justify a sub-section organization appeared to be the Santa Clara Valley and its environs. Accordingly, a number of NorCal members of this area obtained the support of NorCal to form a Subsection which would have its own members (who would all be members of NorCal) and would be subsidized by NorCal. Professor Allen Smith of San Jose State University spearheaded this effort in 1961. Collaborating with Russell Phillips (chairman of NorCal in 1961-62), he developed the first meeting of the South Bay Subsection in 1962. It has continued to be active since then.

It has always been expected that the Subsection would have special projects and objectives, which it would pursue with the agreement of NorCal. These projects have included:

- Meetings with high-school students and their (chemistry) teachers, to learn from active chemical engineers about the nature and activities of our profession.
- Field trips to plants in the South Bay area (Lockheed, Coyote, Kaiser, IBM etc.)
- Involvement with educational institutions in the South Bay area: Stanford University and San Jose State University)

Through the years since 1963, these projects and objectives have been pursued. An "intangible" result of these activities is the influence on many students, high school and college, to undertake chemical engineering as a career. A "tangible" result of these activities is the creation of the Randall Sheeline Scholarship Fund which endows a small scholarship for students starting a university curriculum in chemical engineering.

The Sierra Subsection

Sometime in the mid 1980's, certain NorCal counties outside of the Greater Bay Area petitioned National to separate from NorCal and form a new local section that might have a closer focus of interest for members in those outlying areas. Thus, in 1991 the Sacramento/Sierra Section was created, encompassing a large portion of NorCal's original area, but few of its members. In 1993, at the request of members living in the affected areas, the boundaries were readjusted, restoring portions of Solano and Sonoma counties to NorCal. In 2000, having found it difficult to survive as a viable entity, the Sacramento/Sierra Section was dissolved and reabsorbed by NorCal as its Sierra Subsection.

Sierra Subsection activities focus around industries in the Reno and Sacramento valley areas, but also closely involve the two Student Sections therein: University of California – Davis and University of Nevada – Reno.

The One-Day Symposium

Although it deserves a better name, the April event held by NorCal each year has always (since 1962) been known as the One-Day Symposium. It does indeed last for a full day, although requiring months of preparation, organizing, cajoling, and soliciting before it flies. To date forty eight one-day symposia have been held. Many themes have been featured by the One-day Symposium including Computer Applications in Chemical Engineering, Challenges of Environmental Conservation, What is Ahead for the Chemical Engineer in the Next Ten Years and among the last few years, New Treatment Technologies in Solving Environmental Problems, Chemical Engineering in the Year 2000 and Beyond, New Challenges and Technologies, Environmental Pollution Control - New Policies, Programs and Technology Developments, Chemical Engineering and the Biotechnology Industry and Sustainability. The event combines talks by eminently qualified speakers with a delicious meal, vendor displays and the opportunity to network.

In addition to the technical program, the Symposium also is the venue for presenting the College Awards and the Chemical Engineering Excellence Awards (see below).

In addition to the resources of NorCal and the participating vendors, generous grants supporting the One-Day Symposium are provided each year by a number of companies that operate in this area and employ chemical engineers.

NorCal Awards

Following the example of the national AIChE, NorCal has established a number of awards to recognize achievements, contributions, abilities, and prospects of people in Northern California involved in activities related or potentially related to chemical engineering. These awards include the following:

- **Mott Souders Scholarship.** Monetary awards from a special fund, presented to a number of outstanding high school students (each year since 1975). Award winners are from five different high schools in our territory. These awards are a memorial to Mott Souders, one of the founders of NorCal, and active in the Section for many years, giving many of us administrative and technical guidance. Dr. Souders was also active in national AIChE, and served on the Council.
- **Section Professional Progress Award.** Established in 1982, this award is given to NorCal members in recognition of their personal professional achievement, contribution to chemical engineering and sustained service to NorCal Section. Nominations for one such award are solicited and evaluated each year. The recipient is the featured speaker on a subject of his/her choice at one of the Section dinner meetings, usually June.
- **Randall D. Sheeline Scholarship.** Established in 1985, self funded and administered by NorCal's Career Guidance Committee, this award is given annually to one graduating High School Senior. Randy Sheeline was a long time NorCal member, a Past Section Chair, active with the South Bay Subsection and an AIChE Fellow. He had previously been a member of the SoCal Section.
- **Raymond A. Mugele Scholarship.** Established in 1995 and self funded, this award is given annually to a Chemical Engineering junior at U.C. Berkeley in recognition of academic standing. An alum of that institution, Ray Mugele was a charter member of NorCal Section, a Past Chair of the Section and a Fellow of AIChE.

- Chemical Engineering Excellence Awards: These awards were instituted in 1995. Several awards are available to be given in various categories to recognize outstanding achievements by local members in industry and academia. The categories are Process Engineering, Professional Development, Academic Teaching, Research Project of the Year, and Industrial Project of the Year. The awards are presented at the One-Day Symposium.
- Northern California College Awards. These awards recognize an outstanding graduating senior chemical engineering student at each of the five universities within NorCal jurisdiction. The selection criterion is “that graduating senior judged to have the best prospect for a successful Chemical Engineering career.” In addition to academic record, factors considered for the award are personality, activities and leadership ability. The selection process involves nomination of three class members by the faculty with final choice based on interview by a NorCal committee. The award consists of Membership in the Institute for one year, including initiation fee, membership in the Local Section in the region of the winner's residence after graduation, and a suitable personal gift. An award plaque for each school is engraved with the student winner's name and is displayed at the school. College award winners are from University of California at Berkeley, University of California at Davis, San Jose State University, Stanford University, and the University of Nevada at Reno.

Chairs of the NorCal Section

1945-46 A.G. Stern	1946-47 J.R. Callahan
1947-48 J.A. Samaniego	1948-49 G.L. Allen, Jr.
1949-50 G.C. Gester	1950-51 R.W. Lundeen
1951-52 H.D. Guthrie	1952-53 C.R. Wilke
1953-54 E.B. Chiswell	1954-55 G.B. Zimmerman
1955-56 T.E. Drisko	1956-57 N.K. Hester
1957-58 T. Vermeulen	1958-59 A. Eriksen
1959-60 G.H. Goff	1960-61 J.F. Valle-Riestra
1961-62 R.C. Phillips	1962-63 R.T. Milligan
1963-64 E.M. Blue	1964-65 H.C. Ries
1965-66 K.G. Shaw	1966-67 M. Manders
1967-68 R.H. Schwaar	1968-69 A.S. Foss
1969-70 T.F. Breitmayer	1970-71 M.B. Lawler
1971-72 J.M. Fox III	1972-73 R.J. Ayen
1973-74 R.A. Mugele	1974-75 A.T. Bell
1975-76 E.R. Miller	1976-77 H.J. Browne

1977-78 J.M. Dotson	1978-79 R.D. Sheeline
1979-80 S.D. Bagg	1980-81 G.W. Roy
1981-82 N. Van Klavern	1982-83 S.R. Wilson
1983-84 C.L. Horine	1984-85 J.W. Bagg
1985-86 M.K. Buchanan	1986-87 T.T. Cheung
1987-88 I. Holtzberg	1988-89 R.S. Upadhye
1989-90 B. Cruz	1990-91 H. Levine
1991-92 J.K. Tuck	1992-93 M.J. Shah
1993-94 H. Amin	1994-95 E.E. Enssani
1995-96 R.A. Katin	1996-97 R.A. Katin
1997-98 C.L. Murphy	1998-99 T.E. Karis
1999-00 J.P. Murphy	2000-01 D.K. Spencer
2001-02 M.R. Qadir	2002-03 A. DaCosta
2003-04 T. McVey	2004-05 J. Lange
2005-06 W.J. Smith	2006-07 V. Basaran
2007-08 R.J. Eisele	2008-09 B.V. Yeh
2009-10 J.L. Bender	2010-11 J.L. Bender
2011-12 H. Lin	2012-13 (vacant)
2013-14 L. Li	2014-15 D. Alkaya
2015-16 M. Bazargani	2016-17 T.W. Fogwell
2017-18 A. Narani	

NorCal Members who have been Officers and Directors of National AIChE

Presidents

H.D. Guthrie (1969), Irving Leibson (1974), W.K. Davis (1981), R.R. Hughes (1982).

Vice Presidents

H.D.Guthrie (1968), Irving Leibson (1973), W.K. Davis (1980), R.R. Hughes (1981).

Treasurer

Andre DaCosta (2011-13)

Directors

E.B. Chiswell, Jr. (1955-57), Charles R. Wilke (1960-62), W.C. Edmister (1962-64), Mott Souders (1964-66), J.R. Fair, Jr. (1965-67), H.D.Guthrie (1965-67), R.L Pigford (1965-67), Irving Leibson (1967-69), R.R. Hughes (1969-71), E.L. Ekholm (1970-72), W.K. Davis (1972-74), A.V. Caselli (1975-77), J.M. Fox III (1976-78), H.M. Rodekohr (1979-81), Ann Ruebush (1987-89), C. Judson King (1987-89), J.M. Braus (1988-90), A.T. Bell (1991-93), Andre DaCosta (2005-07), Diane K. Spencer (2014-16)

Note: Officers and Directors of the AIChE are elected by the entire international membership. Thus you can see that NorCal, through the years, has contributed substantially to leadership of the AIChE.

NorCal Members who have Chaired National AIChE Committees and Divisions

Awards Committee

Alexis T. Bell (1990)

Professional Legislation Committee (now part of Licensure and Professional Development Committee)

Joseph M. Fox III (1988-89), Emmett R. Miller (1990-92).

Women's Initiative Committee

Teresa T. Cheung (Chaired the Women and Minorities Subcommittee (1994-96) followed by the ad hoc Gender Equity Task Force (1995-97). Those activities culminated in the formation of the Women's Initiative Committee in 1997).

Separations Division

Andre DaCosta (2007).

National AIChE Awards Received by NorCal Members

William H. Walker Award for Excellence in Contributions to Chemical Engineering Literature (Given to encourage excellence in contributions to chemical engineering literature).

Robert L. Pigford (1958), Charles R. Wilke (1965), John M. Prausnitz (1967), Theodore Vermeulen (1971), James R. Fair, Jr. (1973), C. Judson King (1976), L.E. Scriven (1977), Morton M. Denn (1984), Alexis T. Bell (2005), Harvey W. Blanch (2013)

Allan P. Colburn Award for Excellence in Publications by a Young Member of the Institute (Given to encourage excellence in publications on the part of younger members of the Institute).

Charles R. Wilke (1951), Thomas Baron (1952), LeRoy A. Bromley (1953), L.E. Scriven (1960), Charles V. Sternling (1960), John M. Prausnitz (1962), Andreas Acrivos (1963), Alice Gast (1992), Arup K. Chakraborty (1996), Chaitan Khosla (1997).

Professional Progress Award for Outstanding Progress in Chemical Engineering (Given to recognize outstanding progress in the field of chemical engineering).

Mott Souders, Jr. (1949), Robert L. Pigford (1955), W. Kenneth Davis (1958), Thomas Baron (1961), Andreas Acrivos (1968), Morton M. Denn (1977), Alexis T. Bell (1983), Arup K. Chakraborty (2004), Jay Keasling (2007).

Founders Award for Outstanding Contribution to Chemical Engineering (Given to recognize outstanding contributions in the field of chemical engineering).

Thomas K. Sherwood (1963), Mott Souders, Jr. (1964), R.L. Pigford (1973), Hugh D. Guthrie (1974), James R. Fair, Jr. (1976), Irving Leibson (1976), Richard Hughes (1980), W. Kenneth Davis (1983), Charles R. Wilke (1986), Edward L. Ekholm (1990), Charles W. Tobias (1991), L.E. Scriven (1997), Morton M. Dean (2008)

Warren K. Lewis Award for Contributions to Chemical Engineering Education

R.L. Pigford (1970), Thomas K. Sherwood (1972), Andreas Acrivos (1984), C. Judson King (1990), Morton M. Denn (1998).

Alpha Chi Sigma Award for Chemical Engineering Research (Given to recognize outstanding recent accomplishments by an individual in fundamental or applied research in the field of chemical engineering).

Arnold A. Bondi (1975), Charles W. Tobias (1983), Robert J. Madix (1990).

R. H. Wilhelm Award in Chemical Reaction Engineering (Given to recognize significant and new contributions in chemical reaction engineering).

Michael Boudart (1974), Eugene E. Petersen (1985), Alexis T. Bell (1992).

Award in Chemical Engineering Practice (Given to recognize outstanding contributions by a chemical engineer in the industrial practice of the profession).

Robert G. Heitz (1974), James R. Fair, Jr. (1975), J. Frank Valle-Riestra (1984).

F..J. Van Antwerpen Award for Service to the Institute (Given to recognize outstanding contributions by a chemical engineer through service to the Institute).

Hugh D. Guthrie (1986), Andre Da Costa (2009).

Service to Society Award

Thomas H. Pigford (1985).

Computing in Chemical Engineering Award

Richard R. Hughes (1979).

Food, Pharmaceutical and Bioengineering Division Award

C. Judson King (1975), Alan S. Michaels (1977), Harvey W. Blanch (1996).

Fuels and Petrochemicals Division Award

Hugh D. Guthrie (2006).

Fuels and Petrochemicals Division – Distinguished Service Award

Irving Liebson (1996).

Management Division Award

Hugh D. Guthrie (1992).

Materials Engineering and Sciences Division - Charles M.A. Stine Award

Alan S. Michaels (1982), Curt W. Frank (1990).

Nuclear Division Award

W. Kenneth Davis (1969), Thomas H. Pigford (1980).

Safety and Health Division – N.H. Walton/R.L. Miller Safety/Loss Prevention Award

Eugene S. DeHaven (1988)

Separations Division – Clarence G. Gerhold Award

C. Judson King (1992), James R. Fair, Jr. (1994).

Heat Transfer and Energy Conversion Division (now part of Transport and Energy Processes Division) – Donald Q. Kern Award

Stanley J. Green (1985)

Heat Transfer and Energy Conversion Division (cosponsored with ASME Heat Transfer Division) – Max Jakob Memorial Award

Alexander L. London (1984)

George Lappin Technical Programming Service Award

Andre DaCosta (2016)

John M. Prausnitz Institute Lecturer Award (renamed for JMP in 2015)

Listing in “100 Chemical Engineers of the Modern Era”

Andreas Acrivos, Alexis T. Bell, Harvey W. Blanch, Ed Ekholm, James R. Fair, C. Judson King, Chaiton Khosla, John M. Prausnitz, James R. Swartz

Members of the National Academy of Engineers

Andreas Acrivos, Thomas Baron, Alexis T. Bell, Michael Boudart, Arup K. Chakraborty, W. Kenneth Davis, Morton M. Denn, James R. Fair, Jr., Alice P. Gast, George E. Keller, Chaiton Khosla, C. Judson King, Alan S. Michaels, John S. Newman, Robert L. Pigford, John M. Prausnitz, L.E. Scriven, Monroe E. Spaght, Charles V. Sterling, James R. Swartz, Charles W. Tobias, Charles R. Wilke.

Where We Are Today

Today, NorCal has approximately 290 dues paying members and is active with six to seven monthly meetings in the North Bay, two to three meetings in the South Bay and one to two in the Sierra per year. In April we have our One-Day Symposium, and we have had social picnics and field tours. We give out various awards and scholarships and continue to be active in government relations with the State of California legislature where we are involved in the arena of professional registration and restructuring of the California Engineers Act. We have a WEB site <http://www.aiche-norcal.simplenet.com> to help communicate to members and aid in employment and career guidance. Our periodic newsletter “The Flowsheet” is available on-line.

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