# Hommage to

# **Prof. Gene H. Golub** 1932 – 2007

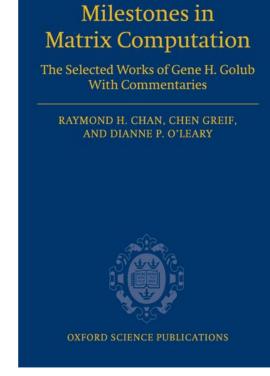
Walter Gander, ETH

Golub Memorial Day HKBU 25 February, 2017

## 10 Years Ago: March 30, 2007, Gene's 75 Anniversary Celebration



happy Gene! at the banquet in Stanford



Gene's birthday present jubilee edition of selected papers last slide of my talk at 75 birthday celebration

#### Dear Gene

many thanks for all you did and still do for the NA-family

Happy Birthday!

Good Health and Many More Happy Years!







#### Honorary Degree One day later, Sat Nov 17, 2007

Gene would have become a Dr. hc. of ETH

Die Eidgenössische Technische Hochschule verleiht mit dieser Urkunde

#### Prof. Gene H. Golub, Stanford

in Anerkennung seiner fundamentalen Beiträge zu numerischen Algorithmen der linearen Algebra sowie zur Förderung der neuen Disziplin Computational Science die Würde eines Doktors der technischen Wissenschaften ehrenhalber.

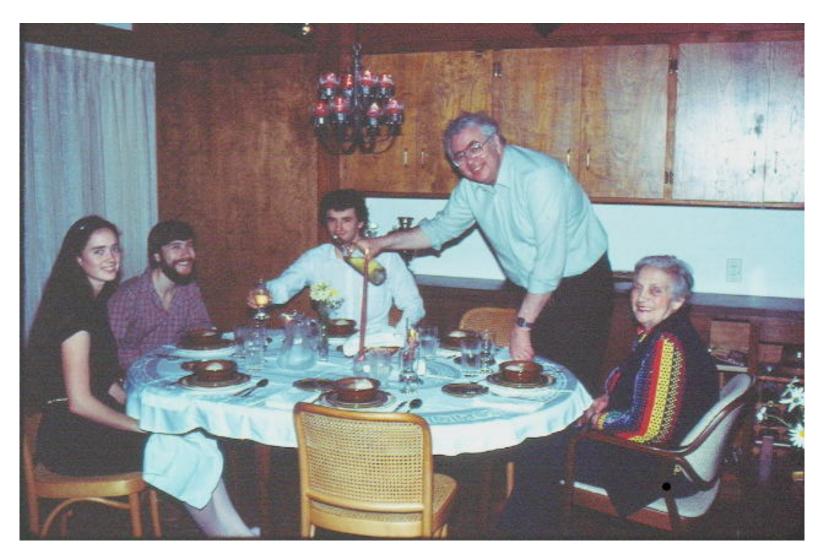
## Feb 24, 2008: Looking for Gene's grave at Shalom Memorial Funeral Home Chicago



#### Grave at Shalom Memorial Funeral Home



(photo Lek-Heng Lim, temporary plate had been replaced)



Gene about aging January 1985, Gene's last year with his mother.

## Gene's 60th Birthday 1992



Gene's family: brother Alvin, sister-in-law Shirley, nephew Neal

# Scientific Legacy

Jack Dongarra, Dianne O'Leary, WG prepared 2007 a nomination of Gene for the Turing Award:

- Pioneer and leader in numerical analysis. Published over 175 journal articles in the area of matrix computations
- Coauthored 17 books. Bestseller is Matrix Computations, with Charles van Loan. ISI Web of Science over 11,000, Google Scholar over 14,000 citations.
- Fundamental contributions to numerical algorithms and software: iterative methods for large linear systems of equations, large eigenvalue problems, least squares problems, matrix moments and quadrature methods.
- Most famous contribution is to the computation and application of the singular value decomposition (SVD), the "Swiss Army knife" of numerical computation (Originally Posted by Dianne O'Leary!).

#### Gene the Teacher

- Supervised 28 Ph.D. students, many now leaders in the field.
- Developed SCCM, the Scientific Computing and Computational Mathematics Program.
- Great mentor to many younger colleagues around the world.
- His matchmaking is responsible for many research collaborations.
- Loved his students, discovered and supported young talents.
- Similar stories for many of us:
  - career starts at Stanford visiting Gene, or
  - Gene discovers a new talent, or
  - Gene proposes topic to work on, or
  - Gene attends a conference and invites you to visit Stanford

# Gene With His Students Spring 2007 in Stanford



Tape Letter 1978 about teaching

#### Gene and the NA-community

- developed Stanford as a center for numerical analysis
- set up a server 1983 for simplifying e-mail addresses: na.lastname@su-score
- "The NA-NET originated at Stanford University by Gene Golub" (Jack Dongarra)
  - Also the origin of NA-Digest and netlib
- President of SIAM 1985-86:
  - founded SIAM Journal on Scientific Computing and SIAM
    Journal on Matrix Analysis and Applications
  - founder of ICIAM (International Council for Industrial and Applied Mathematics)

#### **Dinners and Parties**

Gene loved people

- After the weekly numerical seminar, there was always a cheese-and-wine party at Gene's house
- Gene loved Chinese food
- He generously invited friends to special restaurants
- He loved parties

some examples follow

## Greens in San Francisco 1984



Walter and Heidi Gander, Gene, Voy and Gio Wiederhold, former secretary

#### August 1 Party (1984) (Swiss National Day)



Gene, Werner Stuetzle, Andreas Buja

# Party in May 2006



# Dinner at Gene's Spring 2007



# Another Party at Gene's House



Party 2007

# Travels, Meeting, Conferences: Gene a Scientific Globetrotter!

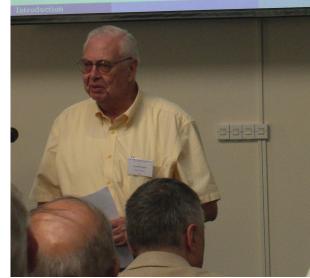
Example: 2007 (assembled from e-mails with Gene, incomplete list ...)

- March: big birthday celebration in Stanford
- 7 April to 23 September: sabbatical in Oxford
- 2 June flight to Tel-Aviv, Israel
- 25–29 June Dundee Numerical Analysis Conference, invited speaker
- 3–7 July Delft/Amsterdam
- 17 July ICIAM in Zurich.
- 23–27 July Second International Conference on Matrix Methods and Operator Equations, Moscow
- 9 August back in Oxford
- August Sept 3: Greece
- 23 September: back in Stanford
- November 2-5 invited speaker at the 3rd East Asia SIAM Conference, Xiamen University + short visit in Hong Kong
- November 9 back in Stanford
- 14–20 November planned visit in Zurich ....

# Moscow July 22–28, 2007

Matrix Computations and the Secular Equation

Gene H. Golub



Conference on Matrix Methods and Operator Equations



Gene with former student Dmitry Belogolovsky



# Gene and Eugene Tyrtyshnikov, July Moscow 2007

# Hong Kong October 2007



Last words of Gene to Heidi on Wed Nov 14, 2007 We have to keep our spirits up