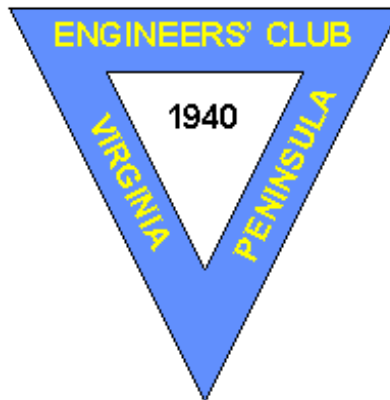


# THE ENGINEERS CLUB OF THE VIRGINIA PENINSULA



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## "El Nino and the Benefits of Basic Research"

*Wednesday, January 14, 1998*

**Speaker:** *Dr. Takmeng Wong, of Atmospheric Sciences Division, NASA Langley Research Center*

**Topic:** *The current El Nino warning system is the fruit and hard work of more than two decades of basic research, performed by many atmospheric and oceanic scientists around the world. This talk will concentrate on the current scientific understanding of El Nino and how this knowledge can be used to minimize the economics and human cost related to El Nino event.*

**Location:** *Quality Inn & Suites on Mercury Blvd (our usual place).*

**Times:** *6:00 PM Social, 6:30 PM Dinner, 7:30 PM Presentation.*

**Meal:** *There will be a served dinner at a cost of \$12.00.*

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**Reservation Deadline: January 10**

Ron Harvey 249-2322 (h)

Abe Leiss 877-2939 (h)

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**ENGINEERS' CLUB OF THE VIRGINIA PENINSULA****SUMMARY OF JANUARY 1998 MEMBERSHIP MEETING****TALK BY DR. TAKMENG WONG, NASA- LANGLEY RESEARCH CENTER**

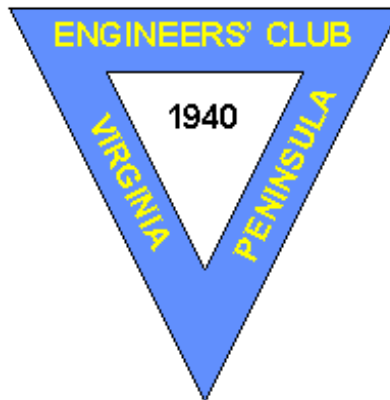
Thirty-one ECVF members and guests attended the 14 January 1998 Membership Meeting, held at the Quality Inn and Suites in Hampton. Dr. Takmeng Wong, a Research Scientist in the Radiation Sciences Branch of the Atmospheric Sciences Division at the NASA Langley Research Center gave a 40-minute talk- and-visual presentation on "El Nino and the Benefits of Basic Research". Dr. Wong is a Ph.D. graduate of Colorado State University, and is a member of the American Meteorological Society and the American Geophysical Union. Among the several interesting facts presented by Dr. Wong were the following:

- Research shows that the El Nino phenomenon has been going on for at least 450 years, starting in 1567. Therefore, the phenomenon does not appear to be a consequence of Global Warming.
- An El Nino occurs every 2 to 7 years over the Tropical Pacific Ocean, with major episodes every now and then. In this regard, there were three major events in the 19<sup>th</sup> Century, and four to date in the 20<sup>th</sup>.
- An El Nino constitutes a major disruption of the ocean-atmospheric system...". Its features include a weakening of the Tropical Easterly wind currents, a warming of the Eastern Pacific waters, a change of the slope of the Ocean surface itself, a change in jet stream patterns, and a fostering of intense Cumulonimbus clouds in the Eastern Pacific (which in itself helps to disrupt the normal upper atmospheric wind flows).
- The present El Nino has caused notable weather disruptions (extreme drought)in Indonesia and Australia, resulting in severe forest fire outbreaks.
- The last major El Nino is estimated to have caused \$8.1 Billion in damage and disruptions worldwide. Accurate forecasts of El Ninos could provide a significant impact in deploying resources efficiently in the areas of Agriculture, Utilities, Water Resources, and Public Health.
- The latest satellite observations indicate that the current El Nino is now starting to wane.
- Effects of the current El Nino for the Continental USA may be summarized:
  - Increased precipitation, and decreased average temperature for the Gulf States and Florida
  - Decreased precipitation , and increased average temperature, for the North Central states
  - About-average conditions for our local region
- While the behavior of El Ninos is being well-documented and understood, the cause of the phenomenon itself is not understood. No one knows for sure what causes them.
- NASA has a responsibility to try to understand and predict El Ninos. To this end, observations from both research satellites(CERES 1 and 2, and ERBE) and routine operational weather satellites, such as the NOAA series, are used. Surface-based data gathered from ships and buoys(providing soundings of temperature and current strength ) and shore stations (providing measurements of mean sea level variations) are also employed.

Following his talk, Dr. Wong answered several questions from the audience. Abe Leiss concluded the meeting by announcing that the Peninsula Engineering Council has instituted an additional Engineer of the Year Award, which will be given to an Engineer who is 35 years or younger in age, with at least 15 years' experience. The new award is called the Ensor Award, commemorating Doug Ensor's key contribution in the formation of the Peninsula Engineering Council . Abe then introduced Doug Ensor, who expressed his gratitude in the naming of the award.

Richard E. Davis.  
Recording Secretary, ECVF  
20 January 1997

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## "Gateway 2000"

*Wednesday, February 18, 1998*

**Speaker:** *Chuck Akers, Head Engineer, Gateway 2000*

**Topic:** *Hampton's Gateway 2000 facility. Ground breaking to production in only seven months.*

**Location:** *Quality Inn & Suites on Mercury Blvd (our usual place).*

**Times:** *6:00 PM Social, 6:30 PM Dinner, 7:30 PM Presentation.*

**Meal:** *There will be a served dinner at a cost of \$12.00.*

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### **Reservation Deadline: February 14**

Ron Harvey 249-2322 (h) ... Abe Leiss 877-2939 (h)

*March 11 (tentative) is an all day bus tour to the Institute for Highway Safety in Ruckersville, VA, a crash testing facility.*

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## **ENGINEERS' CLUB OF THE VIRGINIA PENINSULA**

### **SUMMARY OF FEBRUARY, 1998 MEMBERSHIP MEETING**

#### **(TALK BY GARY LAWSON, GATEWAY 2000, INC. HAMPTON FACILITY)**

Thirty-one ECVP members and their guests attended the 18 February, 1998 Membership Meeting, held at the Quality Inn and Suites in Hampton. Publicity Chairman Abe Leiss welcomed those present, and gave a few remarks. He noted that around 700 youth were expected at the Career Day at NASA-Langley on 17 and 18 February. ECVP members Dr. John Duberg, Abe Leiss, and John Pohl will staff a booth there. Abe then introduced Program Chairman Rod Harvey, who gave a brief note on the next two upcoming membership activities-- the trip on 13 March to the Insurance Institute for Highway Safety Crash test facility in Ruckersville, VA, and the April (date TBA) Student Awards banquet, at which the top science and engineering graduating seniors from 21 peninsula high schools will be recognized. Rod then introduced our speaker for the evening --Mr. Gary Lawson, a Senior manufacturing engineer at the Gateway 2000 Assembly plant in Hampton. Mr. Lawson holds a degree in Industrial Engineering from the State University of New York in Buffalo, and has been working at the Gateway assembly plant in Hampton for around four years.

Mr. Lawson gave a very interesting visual timeline and video presentation on the history of the Gateway Corporation and on the construction of the Hampton facility, from ground breaking to initial production in only seven months' time. He also showed site plans, and distributed product brochures.

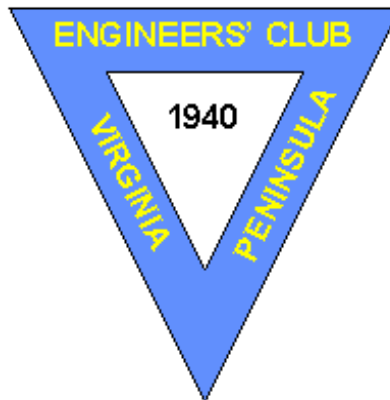
Among the interesting points in his timeline presentation were:

- 1985 -- Ted Waitt started Gateway in his parents' barn in Iowa.
- 1986 -- Gateway becomes a \$1M corporation, with 4 employees.
- 1987 -- \$1.5 M in sales, 8 employees.
- 1989 -- \$20.5 M in sales, 178 employees.
- 1990 -- Moved to South Dakota, 600 employees.
- 1992 -- \$1.1 B in sales, 1850 employees.
- 1993 -- Becomes Fortune 500 company, goes public.
- 1996 -- \$6.6 B in sales, 600 employees.
- 1996 -- Hampton plant goes on line.
- 1997 -- Acquires AMIGA computers

In addition to the US plants in North Sioux City, SD, and Hampton, VA, Gateway has plants in Dublin , Ireland, Australia (former Osborne Computers), and Malaysia. Gateway's growth has been around 40 percent each year, for the last eight years. Most sales occur during the fourth quarter of each year. The Hampton Plant is for assembly only. From the Hampton plant alone, fourth quarter shipments for 1996 were 1,000 in 1996 and 4,000 in 1997, and (anticipated) 10,000 in 1998. Gateway prides itself on an 85-percent customer loyalty(i.e. repeat purchase ) base. The Hampton plant employs 1,500 employees in three shifts. The site occupies 53 acres, of which 6.5 are occupied by the building. An eastern site was needed, because around 80 percent of Gateway's shipments were to locations east of the Mississippi. The Hampton site was chose because of the low unemployment rate, high workforce quality, ideal logistics, and state and local incentives.

Richard E. Davis.  
Recording Secretary, ECVP  
2 March 1998

# THE ENGINEERS CLUB OF THE VIRGINIA PENINSULA



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## "Insurance Institute for Highway Safety"

*Friday, March 13, 1998*

**Topic:** *The crash testing of a 1998 Dodge Durango at 40 MPH.*

**Location:** *Insurance Institute for Highway Safety, crash testing facility Ruckersville, VA.*

**Times:** *Leave from Patrick Henry Mall at 7:30 AM and return before 5 PM.  
Meet at North end of Patrick Henry Mall, i.e. turn off Jefferson at Claire Lane.*

**Meal:** *There will be lunch at a local restaurant before returning.*

**Cost:** *\$10.00 with a limit to first 15 people only.*

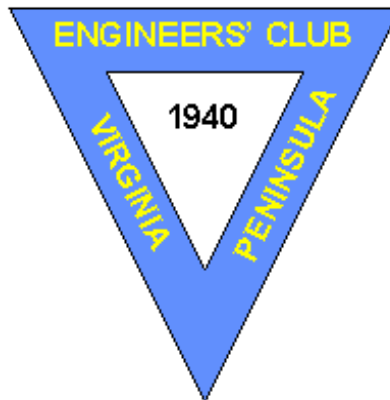
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**Reservation Deadline: March 10**

Ron Harvey 249-2322 (h)

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## "ECVP's Annual Student Awards"

*Monday, April 27, 1998*

**Topic:** *Student awards are given to the top local area high school students.*

**Location:** *CNU's Alumni Room #150, in the Student Center.*

**Cost:** *\$5.00 per person, except for award winners.*

**Meal:** *6:00 PM Heavy Hors D'oeuvres.*

**Times:** *6:30 PM announcements, 7:00 PM Thomas Jefferson impersonator, Bill Barker.*

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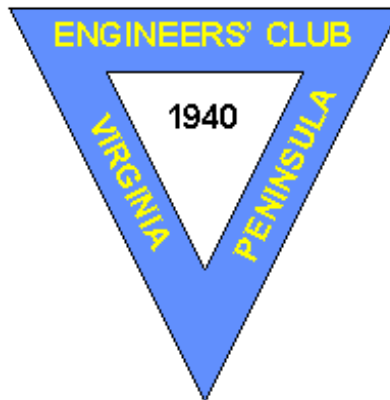
## Reservation Deadline: April 24

Ron Harvey 249-2322 (h)

Abe Leiss 877-2939 (h)

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# THE ENGINEERS CLUB OF THE VIRGINIA PENINSULA



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## "Flow Cytometry "

*Using lasers in the analysis of cell growth, characteristics,  
and prognostication of diseases such as cancer.*

***Thursday, June 11, 1998***

**Speaker:** *Dan Holterman, a Research Associate of the Eastern V.A. Medical School  
and former researcher at the Georgetown Medical Center in DC.*

**Location:** *Quality Inn & Suites on Mercury Blvd (our usual place).*

**Times:** *6:00 PM Social, 6:30 PM Dinner, 7:30 PM Speaker.*

**Cost:** *\$12.00 per person.*

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## **Reservation Deadline: June 08**

Ron Harvey 249-2322 (h)

Since Abe Leiss has passed on, please no calls to his home.

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## **ENGINEERS CLUB OF THE VIRGINIA PENINSULA**

### **SUMMARY OF JUNE, 1998 MEMBERSHIP MEETING**

#### **"LASER FLOW CYTOMETRY" BY MR. DANIEL HOLTERMAN, EASTERN VIRGINIA MEDICAL SCHOOL**

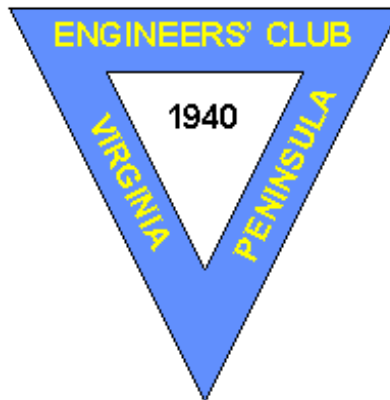
Twenty-one ECVP members and their guests attended the 11 June, 1998 ECVP Membership Meeting, held at the Quality Inn and Suites in Hampton. This was the final membership meeting of the 1997-98 ECVP year. Program Chairman Rod Harvey introduced our speaker for the evening, Mr. Daniel Holterman of The Eastern Virginia Medical School (EVMS), who gave a fascinating talk and vu-graph presentation on Laser Flow Cytometry. Mr. Holterman, a Graduate of Penn State University, has fifteen years' experience in "... applying new technology to the clinic..." He is now completing his PhD Program in Biomedicine at the Old Dominion University(ODU) Center for Biotechnology. He runs the Molecular Biology laboratory at the EVMS.

In his talk, Mr. Holterman highlighted an area of collaboration between Physicists and Biologists which began in the 1970s and is continuing at an increasing level. This collaboration is a particularly good example of a marriage of technologies fostered by laser development and cancer research. Flow Cytometry is the successful outcome of collaboration by laser physicists and cancer researchers, all in response to the question "What happens when a laser beam strikes a cell ?" Cancer is the consequence of uncontrolled cell growth. Laser light techniques can detect the large cancer cells very effectively, because the larger the cell, the larger the degree of light reflection. Laser Flow Cytometry "works" because certain cells stain, while others do not. The cell- stain-response specificity stems from the antibodies, which are very stain- specific in their response. The stained cells can be located by tagging them with laser light of particular wavelengths, then separated out. The separated cells are then used in trying out new cancer-fighting drugs, which "home in" on the antibody-tagged cells. The goal of this broad new area of research to be able to attach a particular medicine to an antibody, so it can home on the particular type of cancer and kill it. It is hoped to be able to design a custom-design treatment for each patient, which can be more specific and less traumatic than present chemotherapy approaches.

The pace of technology development in this area is rapid and exciting. Laser development in the last twenty years has enabled a 20-ft-long instrument to be reduced to a desktop size. What was research just five years ago is now standard clinical practice. Embryologists are also starting to use flow cytometry techniques, because there are aspects common to both embryology and cancer research . Some of the techniques are also being employed in AIDS research.

Richard E. Davis.  
Recording Secretary, ECVP  
29 June 1998

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## ***1998-9 ANNUAL KICK-OFF MEMBERSHIP MEETING***

***Wednesday, October 28, 1998***

**Speaker:** *Tano Maenza, Design Interface Team Leader, will speak on the efforts in migrating the shipyard's computer systems to a Shared Data Environment.*

**Location:** *Newport News Shipbuilding & Drydock, Executive Dining Room  
41<sup>st</sup> Street and Washington Ave., Building 520, Sixth Floor.*

**Times:** *5:00-7:00 PM Social, 7:00-8:00 PM Speaker.*

**Cost:** *Complementary heavy hors d'oeuvres and beverage,  
with a \$3.00 open bar of beer and wine (honor system).*

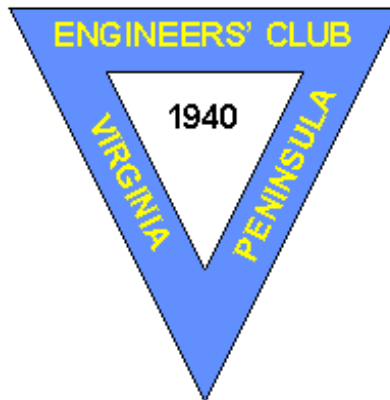
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## **Reservation Deadline: October 26**

John Zinskie 688-8699 (o)

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# THE ENGINEERS CLUB OF THE VIRGINIA PENINSULA



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## *Eastern and Western Perspectives in Acupuncture.*

***Wednesday, November 18, 1998***

**Speaker:** *Dr. Nat Shaye was a mechanical and biomechanical engineer, before he entered the medical field as a chiropractic physician and a physician acupuncturist.*

**Location:** *Quality Inn & Suites on Mercury Blvd.*

**Times:** *6:30 Social, 7:00 PM Dinner, 8:00 PM Speaker.*

**Cost:** *\$13.00 per person (Mediterranean Chicken).*

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**Reservation Deadline: Nov. 15**

Ron Harvey 249-2322 (h)

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**ENGINEER'S CLUB OF THE VIRGINIA PENINSULA**  
**MINUTES OF 15 DECEMBER 1998 BOARD MEETING**

The ECVP Board met at the Warwick Restaurant on 15 December 1998 at 5:30 p.m. Those in attendance were: R. Harvey, J. Duberg, D. Ensor, D. Maglieri, E. Skipper, R. Board, and R. Watson.

**Treasurer's Report:**

The Treasurer's Report was submitted for review. The beginning balance in the Regular Checking Account was \$2,009.85. Total income for November was \$1,141.59. Payments totaled \$55.08, leaving an ending balance of \$3,096.36. The Scholarship Loan Account beginning balance was \$10,397.11 with earned interest for November of \$22.65 leaving an ending balance of \$10,419.76.

Need to Pay ECVP Dues:  
Gannett Fleming  
Eagle Aeronautics  
EGG

**Program Committee:**

A. Student Awards Banquet Committee (Larry Bement) Everett Skipper to call

B. Yearbook Committee (Dom Maglieri)

New cover in process by Dan Pasko. Fax sent with information on ads to past advertisers. Will submit for Honorary Members. Expects to issue new book in late February.

C. Peninsula Engineering Council Committee (Dr. Duberg)

Everett Skipper to send letter to PEC in regards to selection of Engineer of the Year process.

Banquet on track; may be no speaker. Tickets to be available in January. Four "Ensor Award" candidates currently under review.

Engineer of the Year sent to us. Resumes attached. Please call Dr. Duberg with votes by January 10, 1999.

"Ensor Award" Process: Christopher Newport University

Maglieri, Ensor, Pohl, Broad and Duberg are the Committee. The candidates are now under consideration and Maglieri will eventually write the selection letter (no scores) to the PEC President. Next year's ideas include: must be under 35 years of age (no experience allowance; should show birth date). PEC meets January 12th. Maglieri will be there. 25 medals and plastic boxes will be ordered.

D. Program Committee (Ron Harvey)

Dr. Shea will speak January 21, Thursday, re Acupuncture. Expected to be at Quality Inn, 7pm. Harbor Pilots Assn. Tentatively February 9th; George Watkins (Jefferson

Impersonator) will speak at Students Award Banquet at no charge. National Bureau of Standards Accident Investigation

Waste Management, Inc.

Nuclear Waste Disposal, Gibson or Surry

Enterprise Academy

**New Business for Next Meeting:**

- Letter to PEC - Completed
- Vote on Bertelrud received, loan issued
- Telephone reminders needed on Board Meeting

**Next Board Meeting:**

The meeting was adjourned around 7:00 pm. The next Board Meeting will be held at the

Warwick Restaurant at 5:30 pm on Tuesday, 19 January 1999.

Regards,  
Daniel Pasko  
Recording Secretary, ECVF