

## The Ideal of Program Correctness

*Sir C. Antony Hoare*

Thursday, October 2, 2008

7:30 - 9:00 p.m.



**Location:**

George Washington University  
Media and Public Affairs Building  
Classroom 310 (3rd Floor)  
805 21st Street NW  
Washington, DC

**Nearest Metro Station:** Foggy Bottom/GWU  
(Orange/Blue Lines)

Program correctness is a scientific ideal for Computer Science, like accuracy of measurement is for physics, or purity of materials for Chemistry. It should be pursued independent of practical applications, exploiting scientific method to ensure that intermediate research results are cumulative. The research will answer the fundamental questions of

software engineering such as "What does a program do? How does it work? Why does it work? And how do we know that the answers to these questions are correct?" The research results should be incorporated in a research tool known as a program verifier. If the research is successful, its results should be transferred to software engineering practice, and contribute to saving a significant part of the current costs of programming error.

Sir Antony Hoare visits us courtesy of ACM's Distinguished Speaker Program.

***About the Speaker:***

In 1959, as a graduate student at Moscow State University, Dr. Hoare studied the machine translation of languages (together with probability theory, in the school of Kolmogorov). To assist in efficient look-up of words in a dictionary, he discovered the well-known sorting algorithm Quicksort.

Throughout more than thirty years as an academic, Dr. Hoare has maintained strong contacts with industry, through consultancy, teaching, and collaborative research projects. On reaching retirement age at Oxford, he welcomed an opportunity to go back to industry as a senior researcher with Microsoft Research in Cambridge, England. He hopes to expand the opportunities for industrial application of good academic research, and to encourage academic researchers to continue the pursuit of deep and interesting questions in areas of long-term interest to the software industry and its customers.

Dr. Hoare won the ACM Turing Award in 1980 for his fundamental contributions to the definition and design of programming languages. He is also the recipient of the Harry Goode Memorial Award and the Babbage Medal.

## IEEE Computer Society and DC ACM Join Forces

### *Certification of Software Development Professionals*

**Monday, October 6, 2008**

6:30 p.m. – 9:00 p.m.

#### **Location:**

American Academy for the Advancement of Science (AAAS)  
2nd Floor Conference Room  
1200 New York Avenue NW (entrance is on 12th Street)  
Washington, D.C.

#### **Nearest Metro Station:** Metro Center

If travelling by GPS, 38o 58' 00.38" N 77o 01'42.38 W.  
Street parking is free after 6:30PM.

The IEEE Northern Virginia/Washington Computer Society and DC ACM will host a presentation of the Certification of Software Development Professionals (CSDP). The CSDP complies with ISO/IEC standards to provide a portable credential for skill and competence. An article was published in the May 2008 Computer Magazine to stress the importance of professionalizing the Software Engineering industry, increase awareness of ISO's adoption of the IEEE Computer Society's Software Engineering Body of Knowledge (SWEBOK) draft standard, and highlight the CSDP certification, which is gaining momentum globally. We expect the CSDP credential will enhance the career of a practitioner.

The presentation will introduce the CSDP program, its value and process. Attendees will receive a voucher for the examination. The voucher can be only validated via attendance and signature of the presenter. The voucher will provide e-learning, examination and registration for \$550, for a \$300 savings.

The IEEE Computer Society administers the CSDP credential for software engineering professionals. This credential assists the industry in assessing an individual's baseline software development and engineering skills, and requires the candidate to show knowledge and mastery in the industry-recognized software engineering best practices – Software Engineering Body of Knowledge (SWEBOK).

If you plan to attend, RSVP to Glenn Johnson:  
[g.johnson@computer.org](mailto:g.johnson@computer.org)

This event is free and open to the public.

## REMINDER

If you received an invitation to the 50<sup>th</sup> Anniversary Gala, the RSVP deadline is **September 30**.

After this date, the price of the tickets increases.

## QUICK UPDATES

### **Results of the Membership Poll**

Thanks to everyone who participated in the quick online poll.

#### *Current Employment*

Self-employed 9%  
Government employee 15%  
Government contractor 33%  
Other commercial business 8%  
Academic/Education Research Institute 5%  
Full-time student 2%  
Retired 7%

Total Votes 46

#### *Purchasing power for IT products/services?*

Yes 50%  
No 50%

Total votes 48

The most important conclusions from this poll are that about one-third of our members are government contractors, and about one half have purchasing power for IT at their current place of employment. This creates a helpful snapshot of our demographics.

### **Current DC ACM Membership**

As of September 28, we have 164 registered members.

## QUICK UPDATES cont'd

### Results of the Bylaw Amendments Vote

On September 5, members were notified via email of changes to the DC ACM bylaws that had been approved by the Executive Council and the National ACM.

Thank you to everyone who took the time to cast a vote on this very important set of amendments. The final vote was 25-3 in favor. The new two-tier system for membership, and membership dues (\$12/year), will be implemented starting in January 2009. More details about the membership renewal process will be available in the near future.

### Ad-Hoc Historical Committee established

Secretary Ben Schultz has made arrangements for a storage unit and is in the process of consolidating DC ACM records and other materials from a variety of sources. At the September 22 Executive Council Meeting, an ad-hoc Historical Committee was created with a mission to sort through, organize, and make an inventory of the existing materials, and come back to the EC with recommendations on how to either dispose of or preserve the materials. This is a long term project that may ultimately result in the digitization of many of the 50 years worth of DC ACM records. Isaac Christoffersen was appointed chair of the Historical Committee. Please contact him with any questions: [historical@dcacm.org](mailto:historical@dcacm.org).

### Finances

#### Balance Sheet as of September 22, 2008

Checking Account	\$14,415.19
Money Market (Savings)	\$16,639.44
Certificates of Deposit	\$40,000.00
Total Assets	\$71,054.63
Total Liabilities	\$1,600.00
EQUITY	\$69,454.63

The provisional FY08-09 budget was adopted at the September 22 EC meeting. The spring PD Seminars were not included in the budget. A mid-year review will be conducted in January.

### Professional Development Seminars

On September 12 and 13, DC ACM held the first of its two Fall 2008 seminars, "Fundamentals of Intrusion Detection," at George Washington University. The class had 15 registered students. Many of the students who took Fundamentals also enrolled for the next class, "Intermediate Intrusion Detection," which was held on September 26 and 27 with a total of 12 registered students. Breakfast and lunch were served on both days.

The results of the evaluation forms showed that the instructor, Mike Shinn, the CEO of an elite consulting group, was very well-liked. Most negative comments, alas, were about the temperature in the room, because the air conditioner was apparently not functioning well.

While the scale of this year's PD Seminars paled in comparison to its heyday, it still raised significant funds for the chapter:

Total Expenses	\$4,916.10
Total Revenues	\$12,185.00
NET GAIN	\$7,268.90



Students in the Fundamentals class listening intently



Instructor Mike Shinn

## PREVIOUS LECTURE



### **Dr. Harry Hochheiser (Towson University)**

September 11, 2008

Dr. Hochheiser's talk explored recent developments in voting technologies and regulations, from both policy and research perspectives. The foundation of his lecture was that any voting system that does not take into account both technical and social factors will fail.

He also argued that any worthwhile system should meet such criteria as accuracy, reliability, and transparency (to pick a scant few out of the list).

Dr. Hochheiser was relaxed, amiable, and very well versed in the topic at hand. He encouraged the audience to ask questions at any point during the talk, rather than the typical "wait until the end" approach. As usual, the attendees were sharp and inquisitive, and some lively, genteel debate ensued.

To view the archives of all previous lectures (2007-2008) including photos and powerpoints, please visit:  
<http://www.dcacm.org/archives>

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## **SPEAKERS NEEDED FOR THE DECEMBER PANEL:**

### **DC AREA JOB MARKET**

DC ACM is a professional chapter of ACM. The Washington, DC area has a wide range of IT professionals, and a strong tech sector despite the economic downturn. We are organizing a panel the week of December 8<sup>th</sup> that would explore in further detail the regional characteristics (Northern Virginia, Maryland, downtown) and the types of employment (government contractors, R&D, civil service, start-ups, etc.) peculiar to the DC metropolitan area. This panel would be geared towards IT professionals who are considering a job change, pondering their career path, or wondering what skills are attractive in this region's job market. Students of computer science at the local universities may also be interested in attending.

We are hoping to have a panel that represents all of the above. We need your help in locating potential panelists. Perhaps you know someone at your company or a colleague at another company who has good speaking skills and strong knowledge of the current employment situation in the area? Perhaps YOU would be willing to be on our panel?

Please contact the Acting Program Chair, William Fielder, at [programs@dcacm.org](mailto:programs@dcacm.org) if you have any questions or would like to provide the name and contact information of a possible panelist.

## COLUMN

### Malleable Musings from your Member At Large

By Rebecca Prather



From time to time I'll try to share my thoughts with you via this column.

A small group of people (your officers) is trying very hard to revive your DC ACM. We really need your help. Were we to get tired (no hint of that yet, but.....) and give up, the nice nest egg that we inherited from the previous incarnation of the DC ACM and that we've been working with (and using to bring you outstanding, VIP speakers) would be taken away by national and all would be lost.

We've had one outstanding success so far, namely in our first set of revived PD seminars. Now there's more work needed to keep the momentum going.

The membership is growing nicely but we need your help to find "lost souls." Please spread the word of our search via any outlets that you have that are even remotely computer related. You can find the list of people that we want to locate on the DC ACM web site. Please go to the [DC ACM website](#) and have a look. We have an interesting set of "old-timers" coming to the Gala but we'd like to have even more.

DC ACM is heavily subsidizing the Gala. This is one more reason that you'll miss out if you miss the Gala.

We're rounding up boxes of old DC ACM records from kind souls who have preserved them over the years. We're putting them temporarily in commercial storage (for which we're paying a hefty sum) until we can sort, condense, and digitize them (or some of them). Your help in scanning, lending scanning equipment, or providing the ultimate storage would be appreciated.

A group like DC ACM spends a lot for copying and printing. Any ideas or contacts that would help reduce costs in this area would be great.

Do you belong to a national ACM SIG? If so, could you please ask your SIG chairman whether there are enough members in the DC area to start a local SIG?

Your thoughts? Your comments? Please respond to [atlarge@dcacm.org](mailto:atlarge@dcacm.org).



### A Word From Your Editor...

**Cora Dickson**

As Communications Chair, it is my pleasure to bring you CompuTopics each month and keep you informed of the DC ACM activities. I hope it will inspire you to become more involved in the chapter. I will gladly accept newsletter input from any member. Please contact me at [communications@dcacm.org](mailto:communications@dcacm.org) if you would like to make a submission. The deadline is the fourth Monday of every month.

## DC ACM 50th Anniversary Gala

### DON'T MISS THE "PARTY OF THE HALF CENTURY"!

Preparations are in full swing for the Gala, which will be held Saturday, November 1, 2008 at the Hilton in downtown Silver Spring, Maryland. Have you made your reservation yet?

Many DC ACM alumni from the 50s, 60s, and 70s will be attending. If you arrive in time for the cocktail hour, starting at 6:30pm, you can talk to them about the "good old days" before microcomputers or when you could write a tic-tac-toe game that could beat you using only 8K of memory. You can also browse through the historical exhibit to learn more about DC ACM activities over the years while you munch on the variety of hors d'oeuvres being brought around.

Or, you might be tempted to lay down some bids at the Silent Auction. Here are some of the items planned:

- Theater Basket – Tickets and passes to some of the best local theaters in the metropolitan DC area, including Studio Theatre, Signature Theatre, Theatre J, Silver Spring Stage, and the Washington Improv Theater. Plus, three CDs from the Capitol Steps!
- Game Designer Memorabilia – Sid Meier and Richard Garriott (Lord British) will contribute.
- News Junkie Basket – Four passes to the hottest museum in town, the Newseum! Plus, a special tour of the NPR recording studios.
- Sports Basket – tickets and memorabilia from the Redskins, the Wizards, and the Capitals
- Gift certificate for any one-day class at the New Horizons Computer Learning Center
- Last but not least, we have a very special item: an advance copy of the book *Playing Blackjack to Win: A New Strategy for the Game of 21*, personally signed by one of the authors, Herb Maisel, who was a DC ACM Chair in the early 1970s! (see sidebar at right)

Around 7:30pm, you will be treated to a sit-down dinner including a choice of beef, salmon, or vegetarian entrees. While the anniversary cake is served, enjoy a 10-minute documentary featuring several alumni, "DC ACM Memories."

Then, around 8:30pm, the keynote speaker Dr. Bjarne Stroustrup will make his presentation, **50 years of C++ (including "prehistory")**, followed by a chance for the audience to ask him questions.

Finally, as the evening winds to a close, be sure to stay for the door prize drawing: a two-year membership (or renewal) to the National ACM.

You can register and pay online for the Gala at [www.dcacm.org/gala](http://www.dcacm.org/gala) or send a check made out to "DC ACM" along with the [RSVP form](#) to:

DC ACM Gala  
P.O. Box 33153  
Washington, DC 20033

### PLAYING BLACKJACK TO WIN: The Story Behind the Book\*

This new edition of the rarest and most influential blackjack book in the history of the game brings together the most famous contributors in the game. Privately published in 1957 in an extremely limited quantity, this was the first book ever to print the correct winning strategies for the game of blackjack. This instant collector's item includes a foreword by blackjack legend Edward O. Thorp, whose best-selling classic, *Beat the Dealer* (which relied on the original *Playing Blackjack to Win*), changed the public's perception of 21 forever, along with interviews and new material from the authors, known in blackjack as the "Four Horsemen." They were stationed in the army's Aberdeen Proving Grounds in Maryland when they published this work in 1957, completing, at the time, the most extensive mathematical analysis of blackjack ever.

\*Source: Amazon.com  
Note: the book will not be available in stores until mid-November.

## DC ACM CALENDAR AT A GLANCE

October 2	Public Lecture - The Ideal of Program Correctness
October 6	Joint IEEE/DC ACM Meeting
October 20	Professional Development Committee Meeting
October 27	Executive Council Meeting (open to all members)
November 1	50 <sup>th</sup> Anniversary Gala

### Meet the new PDC Chair



Eric Noriega has been appointed Chair of the Professional Development Committee (PDC). As Director of the computer facilities at the School of Engineering and Applied Science at George Washington University, he was very generous to allow use of the computer labs for the Fall 2008 Professional Development Seminars.

If you'd like to join the PDC, now's a good time. Planning for the Spring 2009 seminars (during GWU spring break, March 16-21) will start immediately. The class schedule is likely to be expanded to include a variety of topics and formats. Bring your ideas to the next PDC meeting, which is scheduled for Monday October 20 starting at 7 p.m. in the usual location:

Radio Free Asia  
2025 M Street NW  
Between 20th and 21st Streets  
Ground Floor Conference Room  
**Nearest Metro Stations:** Dupont Circle  
and Farragut North

### About DC ACM

The Washington, D.C. Chapter of the Association for Computing Machinery (DC ACM) was formally established on November 1, 1958. Currently there are more than 2,200 ACM members in the Washington Metropolitan Area, of which approximately 160 are also registered members of DC ACM. Our website: <http://www.dcacm.org>

### Join the Executive Council!

We have one opening on the Council for which we urgently need a volunteer:

*Awards Chair:* Currently responsible for coordinating the volunteers who judge at the various regional science fairs (junior and senior high school students) every spring. Possible future projects could include reestablishing the DC ACM scholarship program.

See [Standing Rules](#) for detailed description.

### DC ACM Executive Council

Click on the name to email.

Chair	<a href="#">William Fielder</a>
Vice Chair	<a href="#">Isaac Christoffersen</a>
Treasurer	<a href="#">Teresa Hone</a>
Secretary	<a href="#">Ben Schultz</a>
Member at Large	<a href="#">Rebecca Prather</a>
Communications	<a href="#">Cora Dickson</a>
Membership	<a href="#">Kent Miller</a>
PDC	<a href="#">Eric Noriega</a>
Programs	<a href="#">William Fielder</a>
(acting)	
Awards	Open