



Association for  
Computing Machinery

*Advancing Computing as a Science & Profession*

#### Quote/Unquote

##### **Alain Chesnais, President of the Association for Computing Machinery (ACM)**

*“As a French citizen living in Canada, the first French ACM President and its second European President, I have the honor and privilege to support ACM Europe at ICT2010. ACM Europe is a real opportunity to focus on specific domains and challenges that are important to computer science professionals and researchers living and working in Europe. Our expansion in Europe perfectly complements similar initiatives in China and India, demonstrating that we are a truly international association, acting globally to address key challenges in the field. This global outreach will be key in addressing the pressing need to fill educational gaps as we face sea changes in the IT world over the next decade. We want to ensure that our community gets all the resources and services it needs to stay abreast of the latest developments in the field”, said Alain Chesnais, ACM President for 2010-2012 and Founder of Visual Transitions.”*



#### **FACE-TO-FACE WITH ALAIN CHESNAIS, ACM PRESIDENT – Acting globally to serve the Needs of Computer Science Professionals & Researchers in a fast-evolving Landscape**

**Stephanie Parker, Trust-IT Services**

Alain Chesnais, a French citizen based in Toronto, is President of the Association for Computing Machinery (ACM) for 2010-2012 and founder of Visual Transitions, which specialises in computer graphics and social networks. In this face-to-face thought leadership piece with Alain Chesnais we explore how ACM, the world’s largest educational and scientific computing society that unites computing educators, researchers and professionals, plays a crucial role in inspiring dialogue, sharing resources and addressing new challenges in a fast-evolving landscape.

#### **Can you profile the mission of ACM and some of its major achievements in recent years?**

ACM’s mission is to educate the world of computing scientists spanning researchers and professionals and keep our community abreast of developments in the field in any given point in time. This mission is

particularly important as we face sea changes in the IT world over the next decade which will have a huge impact on the field, particularly in terms of shaping the career paths of people from every age group.

ACM stewardship brings to the table the best minds in the world from computer science with thought leadership played by myself, as President, the Executive Committee, where 60% of the members are based in Europe, and the thirty-four Special Interest Groups, called SIGs, which focus on specific domains in the field. For fifty years, our core values have lied in the quality and relevance of our services. Our conferences, peer-reviewed periodicals and transactions are supported by leading figures in the field to ensure very high standards on all relevant computing subjects. Our Digital Library is the world’s best and most comprehensive collection of scientific and computing science content with contributions also from our sister organizations and has been extremely successful. We ensure that content generated is readily available to our members so they stay up to speed on all the key developments. The new services we will be implementing on top of these are deeply grounded in those values.

### **What aspirations and goals have you set as ACM President?**

One of my goals is to build on the achievements of our last President, Professor Dame Wendy Hall, the first European ACM President, by expanding on our work internationally through the ACM Councils that have been set up in Europe, China and India, illustrating that we are a truly international association uniting and bringing real benefit to computing educators, researchers and professionals anywhere in the world where computer science research is taking place. I will be working to ensure their structure and focus are aligned with the needs of their respective regions so that together we can act as a truly international association. Twelve months down the line, I would like to look back and see real and concrete achievements in this direction. My attendance supporting ACM and ACM Europe's activities at ICT2010 this week in Brussels marks an important step towards achieving the goals set. With members of the ACM Europe Council and ACM representatives we will be engaging with ICT2010 attendees not just from Europe but from all over the globe with our international focus firmly in mind.

Another goal of mine is to ensure we also capture content digitally and make that content readily available to our community. The key motivation for attending our conferences is networking with peers and sharing enthusiasm with people doing similar research. However, we organize very large conferences where there are many sessions in parallel. By capturing content digitally we can not only facilitate people coming back to browse content at a later stage but also people unable to attend a specific session, ensuring they stay abreast of developments that are important to them professionally. Non-members browsing on the web will also be able to pinpoint areas of interest to them and see for themselves the benefits of coming on board ACM. For several years now we have very successfully made available the ACM Turing Lectures free of charge to our members. This new service is all about expanding high-quality content provision.

ACM is very much focused on building on our core values. Another new and very exciting service in this respect is called Tech Packs. This service is strongly

supported by our leading experts who are helping us create annotated essential reading lists to facilitate, especially young researchers, in selecting the most relevant content from the vast amount of resources in our Digital Library. Thanks to our Tech Packs we will be playing a key role in helping people match our resources with their specific interests to ensure all our members, old and young, stay up to speed in what is a fast-evolving landscape. The first Tech Pack will be dedicated to Cloud Computing

But it doesn't stop here. Another exciting new growth area I would like to see happen during my presidency is social networking with professional needs firmly in mind. On-line networks are a fundamental change that is expected to continue growing. It is important that we map out how people use and build their networks, both on and off line, and take on board the common practices of young researchers in today's society so as to facilitate professional interactions of real value. Our members will be able to have their own ACM persona and profile their interests in a trusted environment, creating their own personalized services, commenting on content they have found valuable, leveraging expert suggestions, making more informed decisions, as well as forking conversations around specific topics with smaller groups of people both physically at our conferences and virtually through their on-line networks. We also need to encourage our members to update their profiles as their careers, interests and needs evolve over time.

### **You mentioned the sea changes in IT expected over the next decade and the significant impact this will have on careers in the field. How is ACM responding to the need for new competences and skills in computing science?**

If we look at how things are shaping up after one of the worst recessions in recent history, ACM's mission in providing information about job migration around the world can only grow in significance. Our driving force lies in helping computer scientist professionals pinpoint new job opportunities and plan accordingly, as a reality of life especially in the current economic climate. As an international association, we strive to ensure people are kept

abreast of the latest developments through the range of current and new services highlighted above, as well as to anticipate what's coming ahead. The U.S. Bureau of Labor Statistics, to cite one example, predict that 71% of new jobs in engineering will be in computing. Despite the clear career potential in computing, there just aren't enough bachelor level students in computing being trained in the U.S., and indeed elsewhere, to fill the job openings. One of the concrete steps we have taken to address the gap between college and real-world experience is updating our curriculum and introducing new curriculum guidelines for undergraduate IS programs as a valuable resource.

However, it is also essential that we raise awareness around the sea changes ahead so we are in a stronger position to meet evolving educational needs right across the globe. It is crucial that people understand that the rate of change in the field is huge and unlike anything that has ever happened before in the field. One of the things that has motivated me over the last 25 years as I have moved up the ACM ranks from early voluntary activities in Paris is my background in computer graphics leading to my involvement in SIGGRAPH (Special Interest Group on Computer Graphics and Interactive Techniques). I have personally witnessed major changes in this time. If we rewind to the early game consoles in the late 1970s and games like Space Invaders for the Atari 2600 and compare that with today, for example with iPad and demonstrations of game like Epic Citadel, the rate of change in just one generation is simply phenomenal. This domain is accelerating and innovating very quickly as graphics chips double in capacity every six months, which equates to a thousand-fold increase in capacity over a five-year period -- the average shelf life of most game platforms. In other words, game boxes are expected to be 1000 times more powerful in just a few years.

This is just to cite one example in computing science. With this rate of change everything I and my colleagues learned when setting out has been surpassed. Even Moore's Law has largely been surpassed in specific domains such as graphics. No other field comes close to this. It is therefore really

important to stay abreast of the technologies and techniques that are coming along by reading as much as possible and interacting with experts and peers both physically and virtually. These are our top priorities when it comes to providing ACM resources and services, the driving force behind what we do to ensure computer scientists can keep learning and stay at the level they need to be and to innovate in the field. Of course, this rate of change is also what makes the field so very exciting.

### **Why is the involvement of more women in computer science so important?**

There is a pressing need to encourage more women to take up computer science. The ratio between men and women in computer science is heavily tilted towards the former right across the globe. There are also social pressures pushing women away from the field. Yet women make up about half the world's population at a time when there are not enough trained people to fill the new jobs that will be created in the years ahead. It is really important that we leverage real opportunities that are being presented by increasing the involvement and value-add of women in the field.

Our approach is to involve leading women computer scientists to serve as role models demonstrating that a career in the field is possible even though it does not happen overnight. In this respect, Professor Dame Wendy Hall is among the role models serving as a trailblazer for women in science. It is key that we pursue this goal in earnest and in synergy with educationalists, encouraging the take-up of the subject at an early age and before college, showing tangible evidence of what opportunities are available to young women today. After ICT2010 I will be attending the Grace Hopper Celebration of Women in Computing with this firmly in mind and will continue to pursue these goals during my Presidency.

#### **Web Links**

ACM - <http://www.acm.org/>

ACM Europe - <http://europe.acm.org/>

ICT2010

[http://ec.europa.eu/information\\_society/events/ict/2010/index\\_en.htm](http://ec.europa.eu/information_society/events/ict/2010/index_en.htm)