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*** Biography**

Gabriele Kotsis is Full Professor in computer science at Johannes Kepler University, Linz, Austria, and a distinguished member of ACM. Receiving recognition for her work from the very beginning (her master 's thesis, submitted at the University of Vienna in 1991, was honored with the student sponsorship award of the Austrian Computer Society, and her PhD in 1995 was honored with the highly prestigious Heinz-Zemanek award) was doubtlessly a motivating factor for her and her decision to dedicate her career to research in academia and to the scientific community. In 2002, she was one of the co-founding chairs of the working group for professors in computer science within the Austrian Computer Society (OCG). From 2003 to 2007 she was President of the Austrian Computer Society, being the first female holding this position in Austria. In addition to her two-term presidency at OCG, Gabriele takes an active part in the Editorial Board of the OCG Book Series, in the working group Fem-IT (Association of Female University Professors in IT) and in the OCG award committee.

From 2007 to 2015 she served as Vice-Rector for Research at Johannes Kepler University (JKU). Her responsibilities included the development of R&D strategies and policies within the university, coordination and interaction with national and international governmental organisations and funding bodies, and the establishment of collaborations with other research organisations and business partners. Since 2016, Gabriele has been JKU´s representative in the ASEA-UNINET academic research network, which promotes cooperation among European and South-East Asian public universities. Her active involvement in this network led to her nomination and election as President for the current period, February 2019 to July 2020.

Within ACM, Gabriele has gained reputation for organizing ACM conferences and workshops. In 2016, she received an award in appreciation of her accomplishments regarding the ACM WomEncourage conference series. Gabriele is a founding member of the ACM Europe Council, serving at the council from 2008 to 2016. In 2014, she became an ACM Distinguished Member for her contributions to workload characterization for parallel and distributed systems, and to the founding of ACM Europe. Since 2016, she has been an elected Member-at-Large of the ACM council.

*** Statement**

Formal thinking and reasoning together with abstract and geometric modelling led me into computer science in the first place. Fascinated by the beauty and purity of binary systems in number theory, I was particularly passionate about Euclid´s algorithm and prime factorization. I was appealed by the understanding of computers as machines being able to unfold the thinking condensed into algorithms. This picture has crystallized clearly over the past three decades of my active life as a computer scientist.

In our discipline, we have advanced linear (Turing-)machines to multidimensional complexity management machines, algorithmic unfolding machines to creative generative machines in artificial intelligence, and deterministic machines to true randomness in executive machine behavior in quantum computing.

These advances have opened the doors to an infinite spectrum of use domains, out of which a few are currently showing remarkable progress. Research prototypes have rapidly developed into living

examples of totally autonomic machines (level 4-5 vehicles, drones, …), very-large-scale collectives of cooperative machines (combinations of smart phones, watches, cars, homes, …) or of self-adaptive and locally interactive machines (surgical micro-robots, personal digital agents or twins, …).

ACM (which stands for Association for Computing Machinery) has already reacted to significant transitions in the past by redefining and reshaping its agenda. Among the many emerging topics, for the upcoming ACM presidency I consider the following as immediately urgent:

- Computing Machinery fighting the CO2 dilemma
- Computing Machinery fertilizing medical research and health care
- Computing Machinery protecting democracy

No other discipline or technology will have more impact on shaping our future than computer science and technology. This implies a major responsibility for our community, not only from a scientific and technical perspective in being able to provide correct solutions, but also from an ethical and societal point of view. Moreover, global problems must be addressed in a global way, independently from particular individual, national or commercial interests. My vision is that ACM, being a global organization, can and must become the platform which enables us to achieve all goals in question.

I feel honored having been nominated for the position of ACM President. ACM is a volunteer organization, and its impact depends on the help and support from all of us. We are a strong community and it will be my responsibility as President to ensure that ACM serves our needs. But we have to take a step forward. Let us work together, across the globe, not only to serve the needs of our own community, but to utilize our knowledge and expertise in “computing machinery” in order to cope with the challenges we are faced with in our global society.