

## Curriculum Vitae

Tetsuo Ida

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### **Personal Data:**

Born on September 11, 1947 in Yokohama, Japan

### **Education and Degrees**

B.S.(Liberal Arts), the University of Tokyo

M.Sc. (Physics). the University of Tokyo,

M.Sc.(Computer Studies), University of Essex

D.Sc. (Physics), the University of Tokyo

### **Honor**

2004, Doctor Honoris Causa, West University of Timisoara, Romania

### **Professional Career**

1975 – 1988 Researcher, Institute of Physical and Chemical Research (RIKEN)

1988 - 1992, Associate Professor, University of Tsukuba

1989 - 1990, Visiting researcher,

Research Institute for Symbolic Computation (RISC), Johannes  
Kepler University, Austria

1992 – 2012, Professor, University of Tsukuba

2012 – present, Professor Emeritus, University of Tsukuba

### **Guest Professor**

2004 – 2005 National Institute of Multimedia Education,

2006 – 2010 Xiamen University, China,

## **Publication - Papers, books, and essays**

Listed at the websites: [i-eos.org/ida](http://i-eos.org/ida) and [i-eos.org](http://i-eos.org)

## **Award and Grants**

Best Paper Award, Information Processing Society of Japan, 1979

ACM Program Contest: The Founders Award, 2007

Best Paper Award, Japan Society of Software Science and Technology, 2012

More than 20 research grants awarded as a chief investigator from Japan Society for the Promotion of Science (JSPS), and Japanese Ministry of Education, Culture, Sports, Science and Technology in the area of computational origami, symbolic computation, declarative programming and formal reasoning

## **Teaching**

LISP Programming (undergraduate level)

Art of Programming (undergraduate level)

Models of Computation (both graduate and undergraduate levels)

Model Checking (graduate level)

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Tetsuo Ida's contribution in research and education (summary)

Tetsuo Ida studied at Department of Physics, the University of Tokyo. He studied under the supervision of Prof. E. Goto, one of the pioneers in computing. In 1975, he joined the computer science group of Institute of Physical and Chemical Research (RIKEN). There he worked with Prof. Goto in symbolic computation. One of the achievements of the research group was the construction of a computer called FLATS, a dedicated machine for symbolic computation. He worked on parallel hashing algorithms for symbolic computation and designed hashing hardware that was integrated to FLATS machine. Since then he has been active in many areas of symbolic computation research; semantics of programming languages, rewriting theories, and systems and algorithms for symbolic computation.

He moved to the faculty of the University of Tsukuba in 1988. Since then, he focused on research in theoretical aspects of symbolic computation. He led a

research group called SCORE (Symbolic Computation Research Group). He was one of the researchers who observed the importance of equational reasoning and solving in the design of programming languages for symbolic computation. He designed and implemented narrowing calculi for symbolic computation. The narrowing calculi are the engines of constraint functional logic programming language called CFLP, which his group developed in the 1990s.

His research interest includes networked symbolic computation, declarative programming and rewriting until around the beginning of the year of 2005. In 2002 he started research on computational origami (paper fold), as an application of constraint programming and geometrical theorem proving. In particular, he studied origami from a constructive and proving point of view. His previous experiences with modeling programs by rewriting and developing symbolic computation algorithms led him to a successful integration of the knowledge about origami – folklore, that of non-standard geometry and traditional practice, into a consolidated system of origami fold/proving environment called *Eos* (e-origami system). The developments of *Eos* are continually supported by the grants by JSPS.

He is also active internationally in organizing forums for symbolic computation and more broadly in software science and technology. He is one of the international founders of SYNASC, Romanian initiative to promote research in symbolic and numeric computing from its beginning. He has been working with Romanian researchers and Ph.D. students and published many papers with them. Together with Asian researchers in the field of programming languages and systems, he established Asian Association for Software Foundation (AAFS). He also contributed to the promotion of scientific exchanges between Japan and Tunisia.