



Yoshiaki Hagiwara is invited at ICCA2023 to talk on

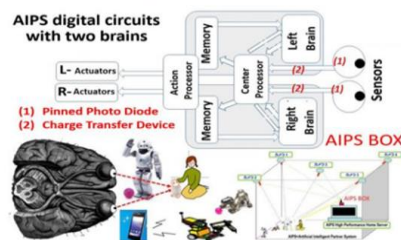
“Artificial Intelligent Partner System (AIPS)”

with Pinned Photodiode used for Robot Vision and Solar Panel”



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Artificial Intelligent Partner System (AIPS)



Abstract—The future of real-time computing will include massive assemblies of parallel processors over mesh-connected wireless networks to execute the vast amounts of computation with vast number of sensors of all types in order to change the way humans and computers interact in order to meet our human needs. This paper explains the details of the artificial intelligent partner system (AIPS) which was originally introduced in 2008 by Sony, using Play Station III Cell Processor and the intelligent image sensor real-time system, using the Sony Original Pinned Photodiode used for future robot vision and solar panels with the excellent short-wave blue light sensitivity and the electronic and global shutter function capabilities for fast action pictures.



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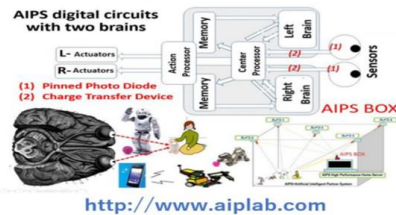
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Biography: Yoshiaki Daimon Hagiwara graduated California Institute of Technology (Caltech) in Pasadena California USA with BS71 with honor, MS1972 and PhD1975. While working at Sony in Japan during 1975 till 2008, he was engaged in the early developments of image sensor and the digital camera chip set including the ADC, DRAM and high-speed Cache SRAM buffer memory chips and digital processor chips used for the AIBO, PS2 and PS3 cells. He was invited to talk at IEEE sponsored CCD'79, ECS1980, ESSCIRC2001, ESSCIRC2008 and ISSCC2013 conferences for his works at Sony. In 1992, he also served as a member of JEDEC memory standardization committee and also as the IEC TC47 technical committee chair of the international standard committee (IEC). He also served as the international program chair and an operational committee member in IEEE EDS sponsored ICMTS conferences since 1991 till 2008, IEEE ISSCC conferences for which he served as the ISSCC Asian Committee chair and also as the ISSCC international technical program (ITC) chair in series. He was also a member of the PC and OC since 1991 and now an advisory committee member of IEEE Cool Chips conferences.

In 2008 he founded and worked as the president in the artificial intelligent partner system laboratory (AIPLAB consortium), a nonprofit research organization (NPO) registered by Kanagawa prefecture government in Japan.

Since 1998 till 1999, he served as a visiting professor at Prof. C. A. Mead Lab of the electrical department at Caltech and also at Prof. T.C. McGill Lab of the applied physics department at Caltech. Since 2003 till 2006, he served also as a visiting professor at Prof. H. Kobayashi Lab in the electronic engineering department at Gunma University in Japan.

Since 2009 till 2017, he taught graduate and undergraduate students as a full professor of the information science department at Sojo University in Kumamoto city Japan. Currently he is serving as a specially appointed professor at the president office in Sojo University and also as a member of the educational committee in Society of Semiconductor Industry Specialists (SSIS) in Japan. He is a Caltech Distinguished Alumni and an IEEE Life Fellow.