Invited Talker
IT1 XML-based genetic programming framework: Design philosophy, implementation and applications

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We present the design philosophy, the implementation and various applications of XML-based genetic programming (GP) framework (XGP). The key feature of XGP is the distinct representation of genetic programs as DOM-parse trees featuring corresponding flat XML-text. XGP contributes to the achievement of (i) fast prototyping of GP by using the standard built-in API of DOM-parsers for manipulating the genetic programs, (ii) human-readability and modifiability of the genetic representations (iii) generic support for the representation of grammar of strongly-typed GP using W3C-standardized XML-schema; and (iv) inherent inter-machine migratability of the text-based genetic representation (i.e., the XML text) in the distributed implementations of GP.

IT2 Brain's doing in its resting-state: Default mode network as an inside story within the brain

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This paper consists of following two sections. (1) A brief tutorial on the DMN is presented with necessary fundamental knowledge of neuroscience on brain. (2) A framework of network informatics for DMN is proposed based on network dynamics; models of information networks are discussed by bridging the gap between the level of regions and the level of neurons of the brain; major issues on analyzing the DMN by brain imaging technology are discussed as well.
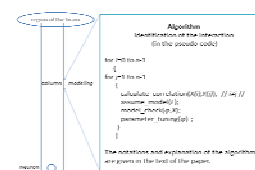

Fig. 1 Identification Algorithm

IT3 Wearing the playware

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In this conceptual paper, we describe and define the range of possible applications and the technical contours of a robotic system to be worn on the body for playful interactions. Earlier work on Modular Robotic Wearable, MRW, described how, by using modular robotics for creating wearable, it is possible to obtain a flexible wearable processing system, where freely inter-changeable input/output modules can be positioned on the body suit in accordance with the task at hand. Here, we drive the attention on early prototypes to show the potentialities of such an approach, and focus on depicting possible application in the electronic games domain. Indeed, the Modular Robotic Wearable is an example of modular playware, which can create playful interactions for many application domains, including electronic games.