

Abstract: A holonic system is composed of entities called holons that are both self-contained wholes but are also part of a larger system. The concept was formulated by Koestler in 1967 within the context of living systems and organizational structures. The applicability of the holonic concept to manufacturing was first noted in the early 1990s and has subsequently resulted in significant research activity worldwide. Holonic systems and multi-agent systems share many similarities; in this talk we describe how one of the more popular approaches for the modelling of intelligent agent behaviour (the BDI model) can be extended to accommodate the requirements of holonic execution in manufacturing environments.

Biography: Dr. Dennis Jarvis has been involved in the development of industrial-strength agent-based systems for the manufacturing, defence and business sectors for the past 10 years. Initially this work was conducted at CSIRO MIT, where he was a Principal Research Scientist and then at Agent Oriented Software Pty. Ltd. He is currently employed as a Research Academic in the Intelligent Systems Research Laboratory at Deakin University.