ICSI Research Plan 1990-92

The last few years have witnessed an explosion of interest in massively parallel computational systems variously called neural nets, connectionist models, etc. Much of this interest is sparked by unrealistic expectations about the power of brain-like machines to eliminate programming, replace conventional computers and unravel the mysteries of the mind.

The initial research plan of ICSI is centered on distributed and parallel computation with a special concern for massively parallel systems. … ICSI is currently addressing issues in four key areas: theory of computation, realization of massively parallel systems, applications of such systems, and very large distributed networks.

The focus is on the middle range future, five to twenty years out. The narrow gap between theory and practice in computer science makes it an exceptionally interesting field, but could create conflict-of interest problems for an international research institute. By concentrating on pre-competitive but result-oriented projects, ICSI can contribute to the technology base as well as the general scientific knowledge of its sponsors. Professional computer scientists are taking a much more cautious view …