Logical Methods in CS publishes PRL article

This month's Logical Methods in Computer Science (Vol 7 Issue 2) published an article by the PRL Group. The article **Knowledge-Based Synthesis of Distributed Systems Using Event Structures** by Mark Bickford, Robert Constable, Joseph Halpern, and Sabina Petride discusses... well rather than try to summarize it, here is the link and abstract:


**Abstract**

To produce a program guaranteed to satisfy a given specification one can synthesize it from a formal constructive proof that a computation satisfying that specification exists. This process is particularly effective if the specifications are written in a high-level language that makes it easy for designers to specify their goals. We consider a high-level specification language that results from adding knowledge to a fragment of Nuprl specifically tailored for specifying distributed protocols, called event theory. We then show how high-level knowledge-based programs can be synthesized from the knowledge-based specifications using a proof development system such as Nuprl. Methods of Halpern and Zuck then apply to convert these knowledge-based protocols to ordinary protocols. These methods can be expressed as heuristic transformation tactics in Nuprl.