HELPUS: How Entry-Level Programmers Use Synchronization

Parallel programming is a powerful tool that can be used to increase performance in most applications, however the skillset required to program in parallel is unavailable to novice programmers. HELPUS is a visual programming language (VPL) that can be configured to directly represent different parallel programming models, such as Traditional Locks or SOFRITAS. It is presented alongside a series of games that represent various parallel challenges faced in real-world applications. By working through the games using the VPL, novice programmers learn to recognize opportunities for adding parallelism in real-world applications.