Cutler's 6-Piece Burr Books

These two books are the definitive analysis of the standard 6-piece burr. The complete analysis of the 35,657,131,235 possible standard 6-piece burrs that are described was a triumph of computer programming and the power of limited computing resources at that time. With his definition of level (the number of moves to remove the first piece, where consecutive movement of pieces in the same direction counts as a single move), Cutler discovered many interesting facts about the standard 6-piece burr, including a maximum level of 12 (one of the assemblies of Love's Dozen), that there are none of level 11, a number of unique level 10 standard 6-piece burrs (e.g., Computer's Choice Unique 10), and that 5 is the highest level for a standard 6-piece notchable burr with a unique solution (e.g., L5 Notchable). He also found the Programmer's Nightmare that has 102 assemblies where only one can be taken apart, and it requires a legal twist move. These books were followed later by other computer analyses of Cutler's, including of a class of 3-piece burrs (yielding the terrific Gigaburr and Gigaburr-2 puzzles).

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