

# PermLab: software for permutation patterns

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*PermLab* is a Java software suite for assisting in research about (mostly classical) permutation patterns. It consists of a GUI which greatly extends the capabilities of its predecessor *ClassCounter* to include both graphical display and manipulation of single permutations, and the display of animations which can reveal underlying structure within collections of permutations. Additionally it includes an extensive applications programming interface which permits the development of special purpose code to deal with specific problems without requiring *too* much familiarity with Java. As well as demonstrating *PermLab* I will discuss some of the underlying algorithms, and its design principles. *PermLab* is open source and contributions to the code base from the permutation patterns community are welcomed.