

Title: Car Traffic on Knot Diagrams and Some Cool Knot Invariants

1. Knots and knot diagrams; knot invariants.
2. The traffic rules: positive crossings only!
3. Example: A kink.
4. Example: The positive trefoil.
5. Relative invariance under R3.
6. Failure of relative invariance under R2.
7. The full traffic rules and algebraic probability theory.
8. Relative invariance under R2, R2c.
9. ρ_1 , θ .
10. Computability.
11. Pictures and table galore.
12. What we don't know.
13. Morals:
 - a. Can solve complicated problems with matrices!
 - b. There's some "probability" even outside $[0,1]$!
 - c. There's still a lot to do!