

## Problem #40

*Originator: Participants at Unif Val d'Ajol*

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*Summary: Does AC unification terminate under more flexible control?*

Fages [Fag87] proved that associative-commutative unification terminates when “variable replacement” is made after each step. Boudet, et al. [BCD90] have proven that it terminates when variable replacement is postponed to the end. Does the same (or similar) set of transformation rules terminate with more flexible control?

# Bibliography

- [BCD90] Alexandre Boudet, Evelyne Contejean, and Hervé Devie. A new *AC* unification algorithm with an algorithm for solving diophantine equations. In John C. Mitchell, editor, *Fifth Symposium on Logic in Computer Science*, pages 289–299, Philadelphia, PA, June 1990. IEEE.
- [Fag87] François Fages. Associative-commutative unification. *Journal of Symbolic Computation*, 3(3):257–275, June 1987. Previous version in the *Proceedings of the Seventh International Conference on Automated Deduction*, Napa, CA, pp. 194-208 [May 1984].