

A *PF*-polynomial calculus representing plain fibring of matrices

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Our aim is to propose a method which produces an algebraic polynomial representation for a fibred product of logics $L_1 \oplus L_2$, starting from the algebraic representation of the components L_1 and L_2 .

As there are different methods to combine logics, we expect that to each one there will be a corresponding method to combine polynomial ring calculi, introduced in [1]. In this work we restrict our analysis to the method of plain fibring, proposed in [2], by proposing a method for combining polynomial calculi called *PF-Polynomial Calculus* that preserves the product obtained by plain fibring.

References

- [1] W.A. CARNIELLI , *Model-Based Reasoning in Science Technology and Medicine* , Polynomizing: logic inference in polynomial format and legacy of Boole, Springer, vol. 64, 2007.
- [2] M.E. CONIGLIO AND V. FERNÁNDEZ , *Plain fibring and direct union of logics with matrix semantics* , Proceedings of the 2nd Indian International Conference on Artificial Intelligence, p. 1590–1608, 2005.