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Matching power. (English) [Zbl 0981.68065](#)

Middeldorp, Aart (ed.), *Rewriting techniques and applications*. 12th international conference, RTA 2001, Utrecht, The Netherlands, May 22-24, 2001. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 2051, 77-92 (2001).

Summary: In this paper we give a simple and uniform presentation of the rewriting calculus, also called *Rho Calculus*. In addition to its simplicity, this formulation explicitly allows us to encode complex structures such as lists, sets, and objects. We provide extensive examples of the calculus, and we focus on its ability to represent some object oriented calculi, namely the *Lambda Calculus of Objects* of Fisher, Honsell, and Mitchell, and the *Object Calculus* of Abadi and Cardelli. Furthermore, the calculus allows us to get object oriented constructions unreachable in other calculi. *In summa*, we intend to show that because of its matching ability, the Rho Calculus represents a *lingua franca* to naturally encode many paradigms of computations. This enlightens the capabilities of the rewriting calculus based language *ELAN* to be used as a logical as well as powerful semantical framework.

For the entire collection see [\[Zbl 0967.00070\]](#).

MSC:

[68Q42](#) Grammars and rewriting systems

[68N30](#) Mathematical aspects of software engineering (specification, verification, metrics, requirements, etc.)

[68N18](#) Functional programming and lambda calculus

Cited in **11** Documents

Software:

[ELAN](#)

Full Text: [Link](#)