GOAL

Composing Petri nets and closing them under linear logic connectives

KLEENE DIALECTICA

L = {-1, 0, 1}

INTERNAL HOM

TENSOR

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MORPHISMS


DIALECTICA

PETRI NETS

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PROBABILISTIC DIALECTICA

L = [0, 1]

Petri net representing the 5K model for infectious diseases

INTEGRAL DIALECTICA

L = \mathbb{Z}

Chemical reaction network with inhibitor arc

PRODUCT OF LINEALEs

(L = \mathbb{R}^+ \times \mathbb{Z})

Chemical reaction network specifying the rates, with inhibitor and catalyst

FUTURE WORK

- Nations of Behaviours of Petri nets
- Differential linear logic Petri nets
- Implementations

MAIN REFERENCES

- Elena Di Zaiove, Walter Leal, Valeria de Paiva, "Differential linear logic Petri nets" (2010)
- "A categorical algebra framework for Petri nets" (2015)
- "Petri nets: Biological realizations, linear logic and Petri nets" (2004)