Title: Proof-theoretic semantics for dynamic logics

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Abstract: Research in the proof theory of dynamic logics has recently
gained momentum. However, features which are essential to these logics
prevent standard proof-theoretic methodologies to apply
straightforwardly. In this talk, I will discuss the main properties
proof systems should enjoy in order to serve as suitable environments
for an inferential theory of meaning (proof-theoretic semantics).
Then, I'll identify the main challenges to the inferential semantics
research agenda posed by the very features of dynamic logics which
make them so appealing and useful to applications. Finally, I'll
illustrate a methodology generating multi-type display calculi, which
has been successful on interesting case studies (dynamic epistemic
logic, propositional dynamic logic, monotone modal logic).

References

1. S. Frittella, G. Greco, A. Kurz, A. Palmigiano, V. Sikimić, A
Proof-Theoretic Semantic Analysis of Dynamic Epistemic Logic, Journal
of Logic and Computation, Special issue on Substructural logic and
information dynamics (2014), DOI:10.1093/logcom/exu063.

2. S. Frittella, G. Greco, A. Kurz, A. Palmigiano, V. Sikimić,
Multi-type Display Calculus for Dynamic Epistemic Logic, Journal of
Logic and Computation, Special issue on Substructural logic and
information dynamics (2014), DOI:10.1093/logcom/exu068.

3. S. Frittella, G. Greco, A. Kurz, A. Palmigiano, Multi-type Display
Calculus for Propositional Dynamic Logic, Special issue on
Substructural logic and information dynamics (2014),
DOI:10.1093/logcom/exu064.

4. S. Frittella, G. Greco, A. Kurz, A. Palmigiano, V. Sikimić,
Multi-type Sequent Calculi, Studia Logica, Proc. Trends in Logic XIII,
A. Indrzejczak,  J. Kaczmarek, M. Zawidski eds, p 81-93 Springer,
2014.

5. G. Greco, A. Kurz, A. Palmigiano, Dynamic Epistemic Logic
Displayed,  Proc.  Fourth International Workshop on Logic, Rationality
and Interaction (LORI 2013) Eds: Huaxin Huang, Davide Grossi, Olivier
Roy eds, 2013.