1. The precise equality with Alekseev-Torrosian in the Montpellier handout:

\[ \text{Alekseev-Torrossian statement. There are elements } F \in \text{TAut}_2 \text{ and } a \in \mathfrak{t}_1 \text{ such that} \]
\[ F(x + y) = \log e^x e^y \quad \text{and} \quad jF = a(x) + a(y) - a(\log e^x e^y). \]

\[ \text{Theorem. The Alekseev-Torrossian statement is equivalent to} \]
\[ \text{the knot-theoretic statement.} \]

\[ \text{Proof. Write } V = e^c e^{uD} \text{ with } c \in \mathfrak{t}_2, D \in \text{Der}_2, \text{ and } \omega = e^b \]
\[ \text{with } b \in \mathfrak{t}_1. \text{ Then} \]
\[ (1) \iff e^{uD}(x + y)e^{-uD} = e^x e^y, \]
\[ (2) \iff I = e^c e^{uD}(e^{uD})^* e^c = e^2 e^{iD}, \text{ and} \]
\[ (3) \iff e^c e^{uD} e^{b(x+y)} = e^b(x) + e^b(y) \iff e^{c_b(e^x e^y)} = e^b(x) + e^b(y) \]
\[ \iff c = b(x) + b(y) - b(\log e^x e^y). \]

Note that A-T also have an additional equation, as in my MSRI handout:

\[ \mathcal{K} \left( e^{2i} e^{-t} \right) = \square \iff \frac{b_i}{y_i} = \frac{1}{y_i} \]

2. Phi is in sder as in Montpellier:

\[ \text{and therefore it is a sum of (undirected!) chord trees. See} \]
\[ \text{http://katlas.math.toronto.edu/drorbn/bbs/show?shot=Moskovich-110223-173549.jpg} \text{ and the following ones.} \]

3. The Alekseev-Enriquez-Torrosian story: The "sled" of SwissKnots:
Do we do the 6-step derivation of the "equivalence" of the existence of Z and the convolutions statement? See Bonn:

4. Do we do the 6-step derivation of the "equivalence" of the existence of Z and the convolutions statement? See Bonn: