Alekseev@FI: Double (Poisson) Brackets, 4

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Alekseev@FI: Double (Poisson) Brackets, 3, was watched on on web, http://www.fields.utoronto.ca/activities/18-19/poisson-summer-school

Σ – compact connected oriented surface
genus g, $n+1 \geq 1$ bdry components
$\partial\Sigma \neq \emptyset$ $\quad \pi_1(\Sigma, *) = \pi_1$

on bndry

$A = k\pi_1$, the group algebra
$\Downarrow$
γ_0 the bndry loop at the bndry containing the base.

Define a double bracket

$$\{\gamma_1, \gamma_2\} = \sum_{p \in \gamma_1 \cap \gamma_2} \epsilon_p \left(\begin{matrix}\text{left}\\ \text{smoothie}\end{matrix} \otimes \begin{matrix}\text{right}\\ \text{smoothie}\end{matrix} \right)$$