The exact details of the quantization of fermions have remained open in TGD framework. The basic problem is the possibility of divergences coming from anti-commutators of fermions expected to involve delta functions in the continuum case. In standard framework normal ordering saves from these divergences for the \blockquote{free} part of the action but higher order terms give the usual divergences of quantum field theories. In supersymmetric theories the normal ordering divergences however cancel.

In TGD the bosonic divergenges are absent due to the generalization of the notion of point-like particle to 3-surface. In fermionic sector normal ordering divergences cancel in unique number theoretic discretization based on what I call cognitive representations but in continuum case the situation is unclear.

Induction procedure plays a key role in the construction of classical TGD. The longstanding question has been whether the induction of spinor structure could be generalized to the induction of second quantization of free fermions at the level of 8-D imbedding space to the level of space-time. The problem is that the anticommutators are 8-D delta functions in continuum case and could induce rather horrible divergences. It will be found that zero energy ontology (ZEO) and new view about space-time and particles allow to modify the standard quantization procedure by making modified Dirac action bi-local so that one gets rid of divergences. Also the multi-local Yangian algebras proposed on basis of physical intuition to be central in TGD emerge automatically.