The twistor lift of classical TGD is attractive physically but it is still unclear whether it satisfies all constraints. The basic implication of twistor lift would be the understanding of gravitational and cosmological constants. Cosmological constant removes the infinite vacuum degeneracy of K\"ahler action but because of the extreme smallness of cosmological constant Λ playing the role of inverse of gauge coupling strength, the situation for nearly vacuum extremals of K\"ahler action in the recent cosmology is non-perturbative. Cosmological constant and thus twistor lift make sense only in zero energy ontology (ZEO) involving causal diamonds (CDs) in an essential manner.

One motivation for introducing the hierarchy of Planck constants was that the phase transition increasing Planck constant makes possible perturbation theory in strongly interacting system. Nature itself would take care about the converge of the perturbation theory by scaling K\"ahler coupling strength α_K to $ \alpha_K/n$, $n=h_{eff}/h$. This hierarchy might allow to construct gravitational perturbation theory as has been proposed already earlier. This would for gravitation to be quantum coherent in astrophysical and even cosmological scales.

In this chapter twistor lift is studied in detail.

\begin{enumerate}
\item The first working hypothesis is that the values of $ \alpha_K(M^4)$ and $\alpha_K(CP_2)$ are widely different with $ \alpha_K(M^4)$ being extremely large so that M^4 part of the 6-D K\"ahler action gives in dimensional reduction extremely small cosmological term. The first interesting finding is that allowing K\"ahler coupling strength $\alpha_K(CP_2)$ to correspond to zeros of zeta implies that for complex zeros the preferred extremals for $ \alpha_K(M^4)$ having different phase are mimimal surface extremals of K\"ahler action so that the values of coupling constants do not matter and extremals depend on couplings only through the boundary conditions stating the vanishing of certain super-symplectic conserved charges.

\item The other working hypothesis is $ \alpha_K(M^4)=\alpha_K(CP_2)$. The small effective value of cosmological constant is obtained if the K\"ahler action and volume term tend to cancel each other. In this case minimal surface extremals of K\"ahler action correspond naturally to asymptotic dynamics near the boundaries of CDs. This option looks more natural.
\end{enumerate}

Both options lead to a generalization of Chladni mechanism to a \blockquote{dynamics of avoidance} meaning that at least asymptotically the two dynamics decouple. This leads to an interpretation with profound implications for the views about what happens in particle physics experiment and in quantum measurement, for consciousness theory and for quantum biology.

A related observation is that a fundamental length scale of biology – size scale of neuron and axon – would correspond to the p-adic length scale assignable to vacuum energy density assignable to cosmological constant and be therefore a fundamental physics length scale.