The presentation was based on the paper of J. E. Fornaess and N. Sibony "Harmonic currens of finite energy and laminations". The Authors develop methods to attack the following long standing problem:

Is there a minimal compact laminated set X in the complex projective surface $\mathbb{P}^2$ which does not reduce to a compact Riemann surface?

In a nutshell, the Authors approach is to develop intersection theory for the associated harmonic currents and (under suitable normalization) to estimate the infimum of the integral of such intersection. The answer to the conjecture depneds on the positivity of this infimum.

The notion of Riemnann surface lamination was explained. This is a set in a compact complex manifold locally homeomorphic to the unit disc in $\mathbb{C}$ times a topological space (usually a piece of Euclidean space), with the additional assumption that the inverse homeomorphism restricted to the first (i.e. disc) variable is holomorphic.

Several exmaples were presented. Then the notion of an associated *harmonic current* was defined. Recall that a positive $(1,1)$ current T is called harmonic iff $dd^cT = 0$. To every Riemann surface lamination one can attach such a current which is locally of the form $\int_{T_w} h(z,w)[\Delta]_w d\mu(w)$, with some transverse measure μ on the topological piece T and $[\Delta]$ denoting current of integration along the local leaf. Here h are continuous functions which are harmonic with respect to the z variable.

Next several potential theoretic classes of functions were discussed and the global structure of positive harmonic currents on Kähler manifolds was desribed.