1. What is the Big Question?
   - Kinship Inference:
   - Given a set of offspring, our goal is to formulate the minimum parentage assignment problem/minimum number of mating problem.
2. What exists?
   - Statistical methods and combinatorial approaches such that - SIBSHIP, Pedigree, KINGROUP, and COLONY rely on statistical estimates of relatedness and reconstruct the maximum likelihood sibling groups.
   - 2-Allele Minimum Set Cover, Family Finder and Almudevar mix statistical and combinatorial approaches
3. What is missing?
   - Most of the above existing methods make assumptions that do not hold for wild populations of animals and plants.
   - Computational complexity is unknown for all the problems except for 2-Allele Minimum Set Cover problem.
4. How do you fulfill that?
   - Here we will list all the variance of minimum parentage assignment/minimum number of mating's problem.
   - We will also formulate all these variances of the above problem computationally and will classify them into buckets such as 'Easy' and 'Hard'
5. What impact will this have on world?
   - We are formulating the biological problems into computational problems so that we can find kinship inference for a majority of wild animals and plants.

Bibliography –

http://compbio.cs.uic.edu/~tanya/teaching/CompBio/notes/SibshipChapter.pdf

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