PPP Core Functions (VCF-based file Functions)

VCF-Filter

- Comprehensive Filtering
- Produces VCFs or BEDs

VCF-Calc

- Basic Statistic Calculator
- Produces STAT Files

VCF-Split

- Splits Single VCF w/ BED or STAT File
- Creates Loci-VCFs

VCF-Phase

- Phase VCFs using Beagle or SHAPEIT
- Creates Phased-VCFs

Four-Gamete Test (FGT)

- Locate sub-regions that pass the FGT
- Creates FGT-compatible VCFs

PPP BED/STAT Functions

STAT-Sampler

- Samples STAT files
- Random & Uniform Sampling

BED Modification Suite

- Edit and filter BED files
- Produces updated BED files

Loci Filter

- Filters loci (rather than sites)
- Produces filtered BED or STAT files

PPP Conversion Functions

VCF to IM Format

Convert multiple VCFs to single IM formatted file

Conversion Suite

- Basic conversions between formats
- Connects to most PPP analyses

PPP Analysis Functions

IMa3

- Estimate the rooted phylogeny for multiple populations
- Integrate over all possible Isolation-with-Migration models

Admixture

• Estimate individual ancestries

Admixture statistics

- **Estimate** *f*₃, *f*₄, D, &, *f*₄-ratio
- Assign populations using a model file

Linkage Disequalibrium (LD)

 Calculate various LD statistics using PLINK