This is a summary of the classes, properties, and methods for the Hybrid Zonotope Toolbox.

1. Properties for all
   1. n - dimension
2. Methods for all
   1. getDimensions
   2. mtimes
   3. plot
   4. plus
   5. containCheck – check is set A is contained within set B
   6. innerApprox
   7. outerApprox
   8. redundancyRemoval
   9. volume
   10. intervalHull
   11. cartProd – cartesian product
   12. convexHull
   13. generalizedIntersection
   14. halfspaceIntersection
   15. hausdorffDistance – compute the Hausdorff distance between sets A and B
   16. pontryaginDiff
   17. union
   18. isEmpty
   19. pointContain
3. hybZono
   1. Properties
      1. c – center vector
      2. Gc – continuous generator matrix
      3. Gb – binary generator matrix
      4. Ac – continuous constraint matrix
      5. Ab – binary constraint matrix
      6. b – constraint vector
      7. nGc – number of continuous generators
      8. nGb – number of binary generators
      9. nC – number of constraints
   2. Methods
      1. getLeaves
      2. plotBinaryTree
4. conZono
   1. Properties
   2. Methods
      1. c – center vector
      2. G – generator matrix
      3. A – constraint matrix
      4. b – constraint vector
      5. nG – number of generators
      6. nC – number of constraints
5. zono
   1. Properties
      1. c – center vector
      2. G – generator matrix
      3. nG – number of generators
   2. Methods
6. affineHPoly
   1. Properties
      1. c – center vector
      2. G – generator matrix
      3. A - constraint matrix
      4. b – constraint vector
      5. nG – number of generators
      6. nH – number of halfspaces
   2. Methods
      1. conContainCheck – creates Yalmip constraints for set containment
      2. conPointContain – creates Yalmip constraints for set containment

Style Guide:

1. Naming
   1. Methods should follow ‘camelCase’ with first letter lower case, no spaces or underscores, and first letter of words capitalized (except for first word)
   2. Properties should be named to closely match what is used in our papers