My hybrid sorting algorithm:

I use insertionSort and quickSort to make my optimizedQuickSort. Because when the list gets large, quicksort is the fastest comparison sorting algorithm. However, when the list is small, quicksort is not the fastest sorting algorithm. So I think in my optimizedSort, when the list is small I can use other sorting algorithm to replace my quickSort algorithm and I will use quickSort to sort large list. In this way, the running time of my optimizedQuickSort is faster than the quickSort algorithm. I choose 50, 100, 200, 500, 1000 to determine the size of a small list, after testing the running time of each list, I use 100 to determine my small list size. Thus, when the list size is small or equal than 100, I use insertionSort to sort the list. When the list size is larger than 1000, I use quickSort algorithm to sort the list. So that is my optimizedQuickSort.