

# Cubature rules with positive weights on union of disks

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- **COMPARISONS:** contains all the subroutines used for our numerical experiments (including previous software that is compared with the new approach); the main demo is the file `demo` make experiments that performs the numerical experiments presented in the paper *Cubature rules with positive weights on union of disks*, comparing the new rules determined by `cub_uniondisks`, including the compressed version, and the old routine achieved by `gqmultibubble`;
  - `demo_make_experiments`: it performs the experiments presented in the paper;
  - `demo_cubature_uniondisk`: it compares the results of new rules (including the compressed one) on integrating some functions on certain test domains;
- **ROUTINES:** contains all the routines necessary for cubature over disks; the main routines are
  - `cub_uniondisks`: implements the algorithm for determining a cubature formula on the union of disks, including the Tchakaloff rules (i.e. their compressed version).
  - `demo_cub_uniondisks`: demo explaining how to use the subroutines and comparing the new rules on some domains.