Colloid

Class_Colloid

-num_dim: integer
-x: real(:),pointer
-v: real(:),pointer
-f: real(:),pointer
-shape: integer
-radius: real
-num_part: integer

num of particles one colloid consist of

-m: real

total mass of a colloid

-noslip type: integer

+colloid_new()
-colloid_init_default(out this:Colloid,out stat_info:integer)
+colloid_init(out this:Colloid,in d_num_dim:integer,out stat_info:integer)
+colloid_init_copy(out this:Colloid,in that:Colloid,out stat_info:integer)
+colloid_display_parameters(in this:Colloid,out stat_info:integer)
+colloid_compute_force(in this:Colloid,in comm:integer,in rank:integer,in MPI_PREC:integer,
out stat_info:integer)

only number of colloid is sufficient large, this routien will be used.

+colloid_finalize(in this:Colloid,out stat_info:integer)
+colloid_get_num_dim(in this:Colloid,out stat_info:integer): integer
+colloid_get_x(in this:Colloid,out d_x:real(:),pointer,stat_info:integer)
+colloid_get_v(in this:Colloid,out d_v:real(:),pointer,out stat_info:integer)
+colloid_get_f(in this:Colloid,out d_f:real(:),pointer,out stat_info:integer)
+colloid_get_shape(in this:Colloid,out stat_info:integer): integer
+colloid_get_radius(in this:Colloid,out stat_info:integer): real
+colloid_get_num_part(in this:Colloid,out stat_info:integer): integer
+colloid_get_m(in this:Colloid,out stat_info:integer): real
+colloid_get_noslip_type(in this:Colloid,out stat_info:integer): integer
+colloid_set_num_dim(inout this:Colloid,in d_num_dim:integer,out stat_info:integer)
+colloid_set_x(inout this:Colloid,in d_x:rea(:),out stat_info:integer)
+colloid_set_v(inout this:Colloid,in d_v:real(:),out stat_info:integer)
+colloid_set_f(in this:Colloid,in d_f:real(:),out stat_info:integer)
+colloid_add_f(inout this:Colloid,in d_f:real(:),out stat_info:integer)
+colloid_set_shape(inout this:Colloid,in d_shape:integer,out stat_info:integer)
+colloid_set_radius(inout this:Colloid,in d_radius:real,out stat_info:integer)
+colloid_set_num_part(inout this:Colloid,in d_num_part:integer,out stat_info:integer)
+colloid_set_m(inout this:Colloid,in d_m:real,out stat_info:integer)
+colloid_set_noslip_type(inout this:Colloid,in d_noslip_type:integer,out stat_info:integer)
+colloid_noslip()
-colloid_noslip_Morris(in this:Colloid,in xf:real(:),in xc:real(:),in vf:real(:),
out vc:real(:),out stat_info:integer)
-colloid_noslip_Morris_Sphere(in this:Colloid,in xf:real(:),in xc:real(:),in vf:real(:),
out vc:real(:),out stat_info:integer)
-colloid_noslip_Morris_Cylinder(in this:Colloid,in xf:real(:),in xc:real(:),in vf:real(:),
out vc:real(:),out stat_info:integer)
-colloid_noslip_Frozen(in this:Colloid,out vc:real(:),out stat_info:integer)