Particles

-ctrl: Control,pointer
-phys: Physics,pointer
-rhs: Rhs,pointer
-stateEquation: StateEquation,pointer
-kern: Kernel,pointer
-tech: Technique,pointer
-x: real(:,:), pointer
-v: real(:,:), pointer
-f: real(:,:), pointer
-ap: real(:,:), pointer
-num_ap: integer
-rho_idx: integer
-mass_idx: integer
-p: real(:),pointer
-id: integer(:,:), pointer
-num_id: integer
-pid_idx: integer
-sid_idx: integer
-num_part_real: integer
-num_part_all: integer

+particles_new()
-particles_init(out this:Particles,out stat_info:integer)
-particles_init(out this:Particles,in d_ctrl:Control,in d_phys:Physics,in d_rhs:Rhs,
                in d_stateEquation:StateEquation,in d_kern:Kernel,in d_tech:Technique,
                out stat_info:integer)
+particles_finalize(in this:Particles,out stat_info:integer)
+particles_init_particles_internal(inout this:Particles,in d_rank:integer,out stat_info:integer)
-particles_init_particles_internal_fluid(inout this:Particles,out stat_info:integer)
-particles_init_particles_colloids(inout this:Particles,out stat_info:integer)
+particles_init_particles_external(inout this:Particles,in d_rank:integer,in d_x:real(:,
                :),in d_v:real(:,:),d_ap:real(:,:),in d_id:integer(:,
                :),in d_num_part:integer,out stat_info:integer)
-particles_init_particles_from_file(out this:Particles,out stat_info:integer)
+particles_display_parameters(in this:Particles,out stat_info:integer)
+particles_decomposition_global(in this:Particles,out stat_info:integer)
+particles_decomposition_partial(in this:Particles,out stat_info:integer)
+particles_compute_density(in this:Particles,out stat_info:integer)
-particles_compute_density_nonsym(inout this:Particles,out stat_info:integer)
+particles_compute_pressure(inout this:Particles,in num:integer,out stat_info:integer)
+particles_compute_force(in this:Particles,out stat_info:integer)
-particles_compute_force_nonsym(inout this:Particles,out stat_info:integer)
+particles_apply_bodyforce(in this:Particles,out stat_info:integer)
-particles_apply_bodyforce_real_1direction(this:Particles,out stat_info:integer)
-particles_apply_bodyforce_real_2direction(inout this:Particles,out stat_info:integer)
+particles_update_position_solvent(in this:Particles,in num:integer,out stat_info:integer)
+particles_update_velocity_solvent(in this:Particles,out stat_info:integer)
-particles_update_position_colloid_real(in this:Particles,out stat_info:integer)
-particles_update_velocity_colloid_real(in this:Particles,out stat_info:integer)
+particles_adjust_position(in this:Particles,out stat_info:integer)
+particles_map_ghost_get(in this:Particles,in l_map_v:logical=FALSE,in l_map_ap:logical=FALSE,
                in l_map_id:logical=FALSE,out stat_info:integer)
+particles_map_ghost_put(in this:Particles,out stat_info:integer)
+particles_get_ctrl(in this:Particles,pointer,d_ctrl:Control,pointer,out stat_info:integer)
+particles_get_phys(this:Particles,d_phys:Physics,pointer,out stat_info:integer)
+particles_get_rhs(in this:Particles,d_rhs:Rhs,pointer,out stat_info:integer)
+particles_get_stateEquation(in this:Particles,d_stateEquation:StateEquation,pointer,
                out stat_info:integer)
+particles_get_kernel(in this:Particles,out stat_info:integer,d_kern:Kernel,pointer)
+particles_get_tech(in this:Particles,d_tech:Technique,pointer,out stat_info:integer)
+particles_get_x(in this:Particles,out x:real(:,:),pointer,in num:integer,out stat_info:integer)
+particles_get_v(in this:Particles,out v:real(:,:),pointer,in num:integer,out stat_info:integer)
+particles_get_f(in this:Particles,f:real(:),pointer,num:integer,out stat_info:integer)
+particles_get_ap(in this:Particles,out ap:real(:,:),pointer,in num:integer,out stat_info:integer)
+particles_get_rho(in this:Particles,out rho:real(:),pointer,in num:integer,out stat_info:integer)
+particles_get_m(in this:Particles,out m:real(:),pointer,num:integer,out stat_info:integer)
+particles_get_num_ap(in this:Paritcles,out stat_info:integer): integer
+particles_get_p(in this:Particles,out p:real(:),pointer,in num:integer,out stat_info:integer)