alignment parallel-computing reproducible-research robust-statistics neuroimaging petsc geometry dataviz mater weather covid-19 computer-vision mathematics global-health matrix lider dynamics data-access gravity **Q e** networks ode algorithm geospatial shiny networkx glm regression genomics cuda tda doi tensorflowpackagejoss pde fem cross-validation ast javascript meteorology workflow bayesian-in spatial-analysis open-science topology ssing ripser computational-biology data-mining