Results from Numerical General Relativity

For several years numerical simulations have been revealing the details of general relativity's predictions for the dynamical interactions of merging black holes. I will review what has been learned of the rich phenomenology of these mergers and the resulting gravitational wave signatures. These wave forms provide a potentially observable record of the powerful astronomical events, a central target of gravitational wave astronomy. Asymmetric radiation can produce a thrust on the system which may accelerate the single black hole resulting from the merger to high relative velocity.