In the 1950’s, General Relativity was more a branch of mathematics than of physics. There were no experiments one could think of to test it, graduate students were advised to stay away from the field, and many professional physicists considered believing in General Relativity to be a matter of faith and not of science. The space age changed all that. In the 1960’s and 1970’s, access to space, new precise measurement techniques, and huge increases in calculational power, combined with a new theoretical approach that emphasized the observational consequences of the theory, changed the nature of the discipline forever. Today, General Relativity is a tool of the engineer’s trade, and we stand on the brink of what would have been unthinkable a few decades ago – measurement of the tiny effects of relativity in the solar system to a part in 108 and detection of gravitational waves with a signal-to-noise ratio of 1000.