Johann Christian Doppler was born in Salzburg. He studied astronomy and mathematics in Vienna, and despairing of getting an academic appointment, he made ready to immigrate to America. At the last moment, he got appointed as Professor of Mathematics, and Physics at Prague Polytechnic in 1841, and later became Professor of experimental physics at Vienna, in 1850.

At the age of 39, he published his most notable work on Doppler Effect (1842). He proposed the phenomena, in which a moving sound source seems more high pitched to someone whom it is approaching than to someone who is moving with the source; and more low pitched to someone, from whom it is moving away. The most familiar is the behaviour of a locomotive whistle as the train passes by someone, standing at the station - from a high pitch it suddenly drops to a low one. Doppler explained correctly, that the motion of the source adds to the sound waves and reach the car at shorter intervals, when the source is approaching. He worked out a mathematical relationship, relating the pitch to the relative motion of source and its observer.

In 1845, a test was made at Utrecht, in which an open railway carriage, carrying a group of trumpeteers, was taken back and forth at different speeds, past a group of musicians with a perfect sense of pitch. It was an extraordinary occasion that made a 19th century to physics and confirmed Doppler's equation.

Doppler also recognised that the effect also applies to light (Doppler shift), which Fizeau pointed out in relation to spectral light of stars, receding or acceding the earth (1848). Doppler died of pulmonary tuberculosis in Venice, Italy in 1853.

Doppler's principle is used in medical ultrasound imaging, for evaluation of cardiac and vascular blood flow. It is of great value in the diagnosis of cardiac defects, DVT and arterial lesions. There are several forms of depiction: Colour Doppler provides mean velocity of flow, by colour coding the information, displaying it superimposed on the grey scale image. Pulsed Doppler allows sampling volume (or gate) to be positioned in the vessel visualised. Power Doppler is five times more sensitive and is used in evaluation of blood flow through vessels in solid organs.