



1811 – Mathematician **Sophie Germain** writes the first of three papers on the mathematics of vibrating surfaces. She later addresses one of the most famous problems in mathematics—Fermat’s last theorem—proving it to be true for a wide range of conditions.

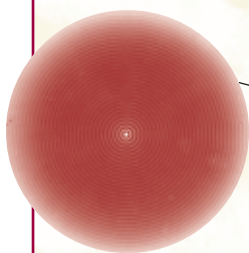


1810 – **Kamehameha I** unites the Hawaiian islands under a monarchy.

1814

$$\sin \theta = \frac{m\lambda}{a}$$

Augustin Fresnel begins his research in optics, the results of which will confirm and explain **Thomas Young’s** discovery of interference and will firmly establish the wave model of light first suggested by **Christiaan Huygens** over a century earlier.



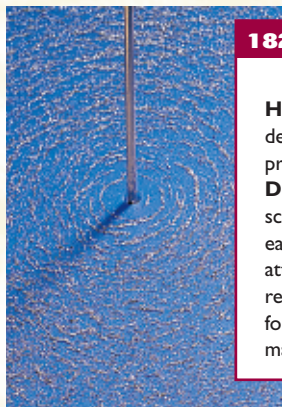
1818 – **Mary Shelley** writes *Frankenstein, or the Modern Prometheus*. Primarily thought of as a horror novel, the book’s emphasis on science and its moral consequences also qualifies it as the first “science fiction” novel.



1820

$$F_{\text{magnetic}} = BI\ell$$

Hans Christian Oersted demonstrates that an electric current produces a magnetic field. (**Gian Domenico Romagnosi**, an amateur scientist, discovered the effect 18 years earlier, but at the time attracted no attention.) **André-Marie Ampère** repeats Oersted’s experiment and formulates the law of electro-magnetism that today bears his name.



1820



1826 – **Katsushika Hokusai** begins his series of prints *Thirty-Six Views of Mount Fuji*.

1830 – **Hector Berlioz** composes his *Symphonie Fantastique*, one of the first Romantic works for large orchestra that tells a story with music.



1830