1114-11-100   **Stephan Ramon Garcia*** (`stephan.garcia@pomona.edu`), Department of Mathematics, Pomona College, 610 N College Ave, Claremont, CA 91711. *The graphic nature of Gaussian periods.*

At the age of eighteen, Gauss established the constructibility of the 17-gon, a result that had eluded mathematicians for two millennia. At the heart of his argument was a keen study of certain sums of complex exponentials, known now as *Gaussian periods*. It turns out that these classical objects, when viewed appropriately, exhibit dazzling array of visual patterns of great complexity and remarkable subtlety. (Joint work with Bill Duke, Trevor Hyde, and Bob Lutz). (Received August 15, 2015)