VISITING SCHOLAR PROGRAM

The PHI BETA KAPPA Society

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Public Lecture Offerings

Surveillance in the 21st Century

In the past, surveillance has tended to focus on persons in special circumstances, such as prison inmates or crime suspects. Even in totalitarian societies, there were practical limits to surveillance. Today, surveillance is becoming ubiquitous and aims to observe commonplace behavior, not just extreme behavior. Technology has made surveillance much cheaper and more feasible for a wide variety of observers. Decisions and actions based on surveillance can be automated, requiring no human involvement. At the same time, more and more information can be gathered somewhat overtly, with the target's tacit cooperation. I will discuss how our legal and economic systems and, more importantly, our habits and thoughts will have to adapt to these new realities.

The Thrall of Technology

The last two decades have seen changes in the fabric of society, wrought by information technology, which are nothing short of revolutionary. Hardly anyone on earth has been untouched by these changes. Compared to earlier eras of rapid technological innovation (such as the period 1880–1920, which saw the advent of electric light, automobiles, and skyscrapers), the physical aspects of our surroundings have not changed as much, even as profound shifts have occurred in a virtual realm. The lecture will discuss the addictive qualities of digital media, consider the far-reaching effects they have had on our social and intellectual lives, and speculate about where things are going.

Portrait of a Genius: Evariste Galois

No one deserves the name of genius more than Evariste Galois. This brilliant young mathematician and revolutionary agitator blazed like a meteor through the intellectual and political world of 19th-century France. He lived for barely two decades, dying in a pistol duel whose cause remains obscure. Yet he left behind him a wealth of profound ideas that have become foundational to mathematics. This lecture will recount Galois's extremely colorful life and times, as well as discussing his mathematical thought in terms accessible to the broadest possible audience.

Classroom Discussion Topics

What is calculus for? When and how do differentiable or integrable functions appear in nature or in human affairs? How does calculus inform our thinking even when we don't use it explicitly? (Intended for calculus classes; could offer a multivariable version)

What is mathematical rigor? How is it a valuable way to think? When is it appropriate or inappropriate? (Intended for upper-division mathematics classes)