CSCI 4325 Bonus

The point of this bonus is to expose you to other areas of Mathematics, Theoretical Computer Science, or Science in general, as well as letting you explore an area you are interested in while learning some history about the people and events involved. You must read one of the books listed or get the book approved.

In order to turn in the bonus assignment, each student must schedule a time to meet with me for 15 minutes to discuss the book. During the meeting, you should be prepared to discuss.

- A summary of the book
- The important people
- Why you chose this book
- The most interesting thing you learned
- Something you wished the book had covered more thoroughly

There are many more books that would be acceptable. The books listed below are merely a sampling of some good books and to illustrate the types of books that are acceptable. These are Math and Science books aimed at educated readers that give a lot of history and explain the concepts without (usually) getting into a lot of rigor. If there is a book you would like to choose that is not on this list, you must get approval first.

Only two people may choose the same book. Thus, before you begin reading you should clear it with me, so you can claim that spot.

Some Acceptable books:

A Beautiful Mind – Sylvia Nasar
Ada's Algorithm – James Essinger
Alan Turing: The Enigma – Andrew Hodges and Douglas Hofstadter
An Imaginary Tale: The Story of i – Paul Nahin
Cosmic Anger: Abdus Salam The First Muslim Nobel Scientist – Gorden Fraser
Dr. Euler's Fabulous Formula – Paul J. Nahin
$e = mc^2$: A Biography of the World's Most Famous Equation – David Bodanis
e: the Story of a Number – Eli Maor
Elliptic Tales – Avner Ash
Euler's Gem: The Polyhedron Formula and the Birth of Topology – David S. Richeson
Euler: The Master of Us All – William Dunham
Fermat's Enigma – Simon Singh
Gamma – Julian Havil
Godel, Esher, Bach: An Eternal Golden Braid – Douglas R. Hofstadter
Godel's Proof – Ernest Nagel, James Newman
Headstrong: 52 Women Who Changed Science and the World – Rachel Swaby
Here's Looking at Euclid – Alex Bellos
Hidden Reality – Brian Greene
I am a Strange Loop – Douglas R. Hofstadter
It Began with Babbage: The Genesis of Computer Science – Subrata Dasgupta
Journey Through Genius: The Great Theorems of Mathematics – William Dunham
Julia: A Life in Mathematics – Constance Reid
Kepler's Conjecture – George G. Szpiro
Life, Logarithms, and Legacy – Julian Havil
My Brain is Open: The Mathematical Journeys of Paul Erdos – Bruce Schechter
Perfect Rigor: A Genius and the Mathematical Breakthrough of the Century – Masha Gessen
Prime Obsession – John Derbyshire
Relativity Simply Explained – Martin Gardner
Rise of the Rocket Girls: The Women Who Propelled Us, from Missiles to Moon and Mars – Nathalia Holt
Rosalind Franklin: The Dark Lady of DNA – Brenda Maddox
Symmetry and the Monster: One of the Greatest Quests of Mathematics – Mark Ronan
The Annotated Turing – Charles Petzold
The Code Book: The Science of Secrecy from Ancient Egypt to Quantum Cryptography
The Difference Engine – Doron Swade
The Elegant Universe – Brian Greene
The (Fabulous) Fibonacci Numbers – Alfred S. Posamentier
The Girls of Atomic City – Denise Kiernan
The High Frontier: Human Colonies in Space – Gerard K. O'Neill
The Immortal Life of Henrietta Lacks – Rebecca Skloot
The Irrationals: A Story of the Numbers You Can't Count On - Julian Havil
The Man Who Knew Infinity – Robert Kanigel
The Man Who Loved Only Numbers – Paul Hoffman
The Music of the Primes – Marcus Du Sautoy
The Poincare Conjecture – In Search of the Shape of the Universe – Donal O'Shea
The Untold Story of the American Women Code Breakers of World War II – Liza Mundy
There's Something about Godel – Francesco Berto
Time Travel and Warp Drives – Allen Everett and Thomas Roman
Time Traveler: A Scientist's Personal Mission to Make Time Travel a Reality – Ronald L. Mallett
Turing's Vision: The birth of Computer Science – Chris Bernhardt