Stochastic Processes: Theory and Applications

Course Code: AI5090 (Cross-Listed with EE5910)

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What to Expect?

- In-depth coverage of the notions of convergence
- Formal introduction to the theory of random processes
- Theory behind some common simulation techniques
- Emphasis on doing formal mathematical proofs

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Schema for Grading

- Homework assignments (released periodically)
- Quizzes based on homeworks
- Each quiz: 5 points, 30 minutes (day: TBD)
- 6 quizzes, 4 best out of 6 will be considered for final grading

Attendance	10%
Scribe (in LaTeX)	10%
Quizzes	20%
Mid-Term 1	15%
Mid-Term 2	15%
Final Exam	30%

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References

- *Discrete Event Stochastic Processes*
  Lecture notes by Prof. Anurag Kumar, Department of ECE, IISc
- *Stochastic Processes: Theory for Applications*
  Robert G. Gallager, Cambridge University Press, 2013
- *Probability and Random Processes*
  Geoffrey Grimmett and David Stirzaker
- *Random Processes for Engineers*
  Lecture notes by Prof. Bruce Hajek, UIUC
  (Free copy of the pdf available on the author's website)

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Other Useful References

- *Probability Foundations for Electrical Engineers*.
  NPTEL lectures by Prof. Krishna Jagannathan, IIT Madras
- *Probability and Stochastic Processes*.
  NPTEL lectures by Prof. Krishna Jagannathan, IIT Madras
- *Stochastic Processes*
  Video lectures by Prof. Vincent Y. F. Tan, National University of Singapore

The Team

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