

Physics Seminar

Random Thoughts

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3:30pm
Ross 0220**

Can a deterministic system display random behavior? A deterministic system is one for which its current state has a specific dependence on the past. A random process develops without a causal connection to the past. However, (nonlinear) deterministic systems can exhibit chaotic behavior. A chaotic system evolves in a deterministic way, but examination of its output doesn't allow for a careful prediction of its future state. One may see this as random behavior evolving through deterministic means. What goes on here? A deterministic system exhibiting chaos is discussed with the hope of gaining some insight into this behavior.