On Coinduction

A slow weekend - I needed the rest.

Dexter Kozen just uploaded an article on *Coinductive Proof Principles for Stochastic Processes* to CoRR, wherein he gives "an explicit coinduction principle for recursively-defined stochastic processes. The principle applies to any closed property, not just equality, and works even when solutions are not unique. The rule encapsulates low-level analytic arguments, allowing reasoning about such processes at a higher algebraic level. We illustrate the use of the rule in deriving properties of a simple coin-flip process." I looked at this paper a while back, and it remains interesting.

- Coinductive Proof Principles for Stochastic Processes_, by D. Kozen.

On a different bit of news, the CSLI Lecture Notes are now freely available online, *gracieuseté* of the Stanford Medieval and Modern Thought Text Digitization Project.

- CLSI Lecture Notes

That series includes the classics

- Troelstra's *Lectures on Linear Logic*
- Goldblatt's *Logic of Time and Computation*

and to remain in the spirit of coinduction, two of the core monographs on the theoretical foundations of coinduction:

- Aczel's *Non-well-founded Sets*
- Barwise and Moss's *Vicious Circles : On the Mathematics of Non-wellfounded Phenomena*

(via Richard Zach's LogBlog)