

work of Bass and Wall on reduction in the K - and L -theory of complete local rings but also explained the connections with Hensel's lemma in number theory and the relevant step in the computation of $L_*(\pi)$ for π finite (namely, that $\hat{Z}[\pi] = \prod_{p \text{ prime}} \hat{Z}_p[\pi]$ is a product of complete semilocal rings). The whole book is written in the style of Bass [2], so that the witty comment of Adams [1] applies here also: "This is algebra in blinkers...it is like the three wise monkeys: see no geometry, hear no number theory and speak no topology". The books of Milnor [3] and Milnor-Husemoller [4] should also have been used as models.

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The geometry of biological time, by Arthur T. Winfree, Biomathematics, vol. 8, Springer-Verlag, New York, Heidelberg and Berlin, 1980, xiii + 530 pp., \$32.00.

This book views biological periodicities through the lens of topology. It describes experiments on biological and biochemical rhythms. It interprets them in the light of topological constraints on continuous mappings between manifolds. It states only one theorem and very few equations.

A central example will illustrate the book's thrust.

A fruitfly of the species *Drosophila pseudoobscura* starts life as a fertilized egg. It develops into a larva, which eats until it matures into a pupa. The pupa acquires a hard outer cuticle, the pupal case. Within the pupal case, larval organs metamorphose into adult organs. When all is ready, a winged adult ecloses from the pupal case. The duration of eclosion is so short compared to the durations of the pupal and adult stages before and after it that eclosion is considered to occur at a discrete epoch in time.

If a population of pupae is reared under constant conditions that include bright light, eclosion times are distributed over the 24-hour day. Suppose the pupae are reared in constant bright light for some time, and then suddenly plunged into darkness. Call the epoch of this transition from light to darkness $T = 0$ hours. Within an interval of one and a half hours around $T = 17$ hours, there will be a burst of eclosion. This peak of eclosions will be followed by no