Calcium in the heart: going up and coming down

Prof. David Eisner
Professor of Cardiac Physiology at The University of Manchester
(B.A. Cambridge, Natural Sciences, 1976; D.Phil Oxford, Physiology, 1979)
President of The Physiological Society.
He has served as Editor-in-Chief of The Journal of Molecular and Cellular Cardiology and The Journal of Physiology.

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During each cardiac cycle, intracellular calcium concentration must rise high enough in systole to activate the contractile proteins to pump blood out of the heart. Equally importantly, in diastole calcium must be low enough that the heart is relaxed and can fill with blood. The first part of the talk will discuss the importance of the balance of calcium influx and efflux in the heart and how this regulates both the systolic rise of calcium concentration and the calcium content of the intracellular store, the sarcoplasmic reticulum. The final part will consider the factors responsible for regulating diastolic calcium concentration.