

## Summary in English

**Ulf Persson, Torsten Ekedahl 1955-2011** (Swedish)

An obituary of an untimely deceased Swedish mathematician of renown.

**Hiroshi Okumura, Are those Archimedean triples circles really triplts? Dilations and the arbelos.** (English).

The arbelos is a classical geometric figure formed by three mutually tangent circular arcs whose three intersections points are collinear. Special circles associated to the arbelos was already studied by Archimedes, and in these two articles, further variations on the theme are presented.

**Ola Christensen, Kristian Borg Thomsen, Mads Paulsen Gibbs' phenomenon swinger i 2D** (Danish)

The point-wise convergence of the partial sums of a Fourier series to a function can be established for piece-wise differentiable functions, with jump discontinuities allowed. The convergence is not uniform at the points of discontinuity, and its deviation from uniform continuity can be made very precise as about 9% of the jump. This is known as the Gibbs' phenomenon. The introductory part of the article contains a derivation of the phenomenon, while the

main part discusses what appears for functions of two variables. The situation is then restricted to functions of type  $f(x, y) = f_1(x)f_2(y)$  which is simple enough to allow explicit calculations but general enough to allow a glimpse of the complexities that arises. It turns out that the 'overshooting' is unpredictable from knowing the jump of the discontinuity.

**Jorge Jimenéz Urroz, A note on series of positive numbers** (English)

There is no ultimate test for convergence of a series, thus it is always of interest to find weaker and weaker criteria. In this note the author revives a criterion due to de la Vallée Poussin. More specifically, let  $a_n \geq 0$  and  $\sum_n a_n$  divergent, meaning that the partial sums  $s_N$  are monotonically increasing to  $\infty$ . Then let  $f(x)$  be a decreasing function such that  $\lim_{x \rightarrow \infty} f(x) = 0$ . Then there are natural conditions in terms of  $f$  for the series  $\sum_n f(s_n)a_n$  and  $\sum_n f(s_{n-1})a_n$  to be convergent respectively divergent. Variations and corollaries of these criteria are presented.

**Ulf Persson, Hopningspunkter** (Swedish)

An elementary discussion of accumulation points, especially strong such, with the conclusion that any closed countable set can be reduced to the empty set by recursively removing all isolated points.