

## *Midnight - School Lectures "Symmetries in Nature - Symmetries in Nuclei"*

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Midnight-School initiative has its roots, on the one hand, in the long tradition of the Zakopane SCHOOLS [organised during nearly half-a-century by the Niewodniczanski Institute of Nuclear Physics and the Jagiellonian University, Krakow, Poland] and on the other hand, in the growing need for lecture-type presentations addressing first of all the younger generation of research persons.

The format of the Midnight School - Zakopane 2010 this year is a bit special. There are only two hours of the lecture-type foreseen this year and they are scheduled rather unusually - literally approaching Midnight. This second aspect is not going to be ignored - OH NO! - it will certainly be taken into account!

The first lecture is of general character and format and is therefore oriented towards general audiences so that not only the participants but also the *accompanying persons* are cordially invited. The program contains surprises but we can say that among others, the magic numbers of nature, the Fibonacci numbers, and related observations of symmetries in plants and (unexpectedly?) in humans will be discussed and illustrated. [To give you another example: We are not 100% sure at this time whether the technical arrangements at the hotel will allow to present this theory - but we have the intention to prove mathematically that the female's beauty is superior to that of the other half of the population - the thought that may come as a surprise to some].

The second presentation, after a small pause, is a bit longer than the first one and will address the problem of symmetries in both the nuclear interactions and the nuclear many-body systems. Again we hope to hide a surprise or two for everyone - but the main lines of the discussion follow the two most fundamental symmetries of micro-nature: the relativity principle and the unitarity in the many-body systems. This time some mathematics will be in the game - yet, taking into account the Midnight's character of the adventure the format should allow all physicists to easily follow.

Don't go to bed too early! Don't follow (even though generally good) the British(?) habit of Pubs, Lassies & Glassies!

Join for the adventure with symmetries, beauty (and beer as far as we can tell).