universität innsbruck
Forschungsschwerpunkt Physik

Innsbruck
Physics Colloquium

Acoustic tweezers and their applications

Colloquium talk
by

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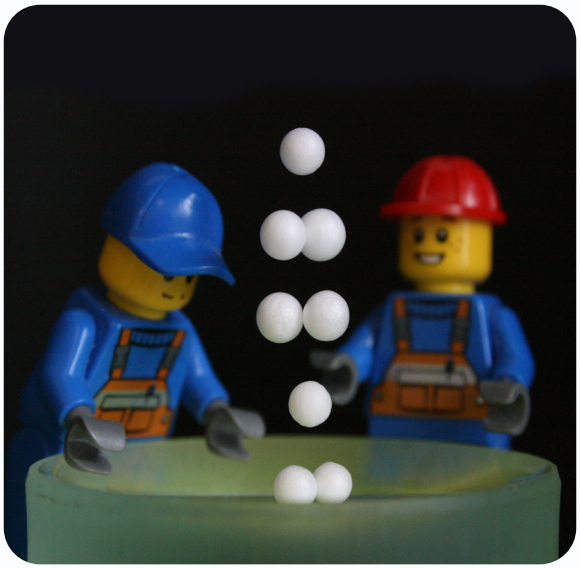
Acoustic (ultrasonic) beams are used widely in medical and engineering imaging where the focal spot size determines resolution. Beams are also key to techniques that use acoustic radiation forces to manipulate objects - acoustical tweezers or tractor beams. Here the beams must be carefully shaped to create the correct local force field. Acoustic holograms lead to exquisite control of beam shape yet are static. Arrays of individual emitters can provide dynamic beam control but are currently lower in resolution. This talk explores how to make the perfect acoustic tweezer and how such devices can be used for applications including the creation of artificial muscle tissue.



Tuesday, 10 June, 16:30

HS C, Victor-Franz-Hess-Haus

Organizers: Katrin Erath-Dulitz, Hanns-Christoph Nägerl, Tim Schrabback