

Egg: a metamaterial



- *physical and/or mechanical properties are determined by structure and not by the chemical nature of its constituents*
- shell, fragile from inside, solid from outside
- T. Ungerer, IPCMS

Thai football



- Weaved approx. of sphere
- (Mulhouse, Fri)

Negative Poisson's ratio (NPR)



- paper folding (E.F. Sanli, Zanzan 1998)
- folds
- **rigid plane rhombi**
- **(J. Grima, Tues.
Mulhouse Fri.)**

Solid foam made of glass



- **Kerroc**
- ideal metamaterial:
owes its essence (strength)
to its non-existence
(holes/bubbles at random)

(Bréchet Thursd.)

Mlle Vionnet (Mulhouse Fri.)



Design a worm

(Obukhov Tues., Fabry Fri.)

