

# Frontiers of Physics Education

GIREP - EPEC Conference 2007  
Selected Contributions



GIREP - EPEC Conference



Faculty of Arts and Sciences  
University of Rijeka



Golden Section Society  
Rijeka

## SUPERCOMET – SUPERCONDUCTIVITY MADE EASY

Vegard Engstrøm<sup>1,a)</sup>, Marisa Michelini<sup>2</sup>, Wim Peeters<sup>3</sup>, Andrzej Karbowski<sup>4</sup>,  
Grzegorz Karwasz<sup>4</sup>

<sup>1</sup>*Simplicatus AS, Postboks 27, Løvenstad, Norway*

<sup>2</sup>*Dipartimento di Fisica, Università di Udine, Italy*

<sup>3</sup>*University of Antwerp, Belgium*

<sup>4</sup>*Institute of Physics, Nicolas Copernicus University, Toruń, Poland*

### 1 SUPERCOMET - SUPERCONDUCTIVITY MADE EASY

Material research is an extremely quickly developing field of modern research. However, common knowledge on material is very weak: we hardly distinguish micro-structural features of glass from those of ceramics, steel from cast iron, memory shape alloys from invar. “Supercomet” attacks this subject in a specific field of superconducting materials, starting from pure metals (Hg, Pb) through inter-metal compounds NiSb<sub>3</sub> to high temperature (YBCO) materials [1].

The international range of the programme and the need to incorporate it into national school curricula made necessary introducing elements of magnetism, magnetic induction, electrical conductivity, in an interactive, multimedia form [2]. However, the didactic path ends with the history of superconductivity, magnetic vortices and the distinction between the first and second type superconductors [1].

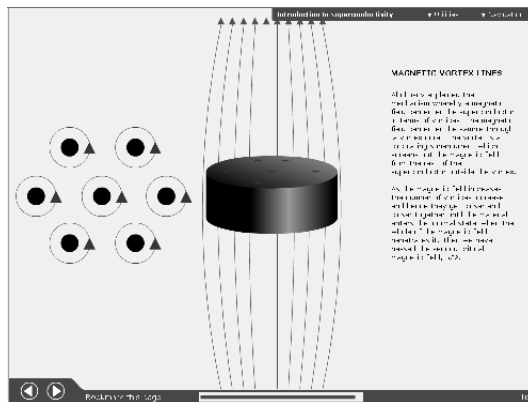


Figure 1 Magnetic vortices in a second type superconductor [1].

### REFERENCES

- [1] Supercomet 2 Project: [http://be.supercomet.no/about\\_the\\_project](http://be.supercomet.no/about_the_project)
- [2] Hands-on experiments in magnetism <http://lab.pap.edu.pl/~zs/supercomet2/>

<sup>a)</sup> Corresponding authors' e-mail: [supercomet@simplicatus.no](mailto:supercomet@simplicatus.no)