

**MINIMIZATION PROBLEMS FOR ATTRACTIVE-REPULSIVE  
INTERACTION ENERGIES**

MICHEL CHIPOT

We would like to consider minimization problems for energies of the type

$$E(\mu) = \int_{\mathbf{R}^d \times \mathbf{R}^d} w(|x - y|) d\mu(x) d\mu(y),$$

$\mu$  belonging to some class of probability measures,  $w$  being a potential given by

$$w(r) = \frac{r^\gamma}{\gamma} - \frac{r^\alpha}{\alpha}$$

with  $0 \neq \alpha < \gamma \neq 0$ .

(Joint work with J. Carrillo and Y. Huang at Imperial College).

INSTITUTE FOR MATHEMATICS  
UNIVERSITY OF ZURICH  
WINTERTHURERSTRASSE 190  
CH-8057 ZURICH  
*E-mail address*, Michel Chipot: [m.m.chipot@math.uzh.ch](mailto:m.m.chipot@math.uzh.ch)