Lattice-Boltzmann simulations of driven transport in colloidal systems
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The work in this thesis covers the following publications:

**Chapter 4:**
F. Capuani, D. Frenkel and C.P. Lowe  
Velocity fluctuations and dispersion in a simple porous medium  
*Phys. Rev. E* 67, 5 (2003), 056306

**Chapter 5:**
F. Capuani, I. Pagonabarraga and D. Frenkel  
Discrete solution of the electrokinetic equations  

**Chapter 6:**
F. Capuani, I. Pagonabarraga and D. Frenkel  
Sedimentation velocity of highly charged spheres  
(in preparation)

**Chapter 7:**
F. Capuani, I. Pagonabarraga and D. Frenkel  
Sedimentation velocity of charged disks at various surface charge and volume fractions  
(in preparation)

**Chapter 8:**
F. Capuani, D. Frenkel and I. Pagonabarraga  
Electrophoretic mobility of charged-neutral model proteins  
(in preparation)

**Other publications:**
M. Cosentino Lagomarsino, F. Capuani, and C.P. Lowe  
A simulation study of the dynamics of a driven filament in an Aristotelian fluid  
*J. Theor. Biol.* 224, 2 (2003), 215