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SUMMARY OF THE 1993 WINTER ACP WORKSHOP
ON
COLLECTIVE DYNAMICS IN DISORDERED SYSTEM

The one week workshop took place in Aspen January, 1993 and was attended by 47 physicists. It was very successful in gathering the best physicists in the world on that subject and provided a natural environment for discussions among experimentalists and theorists.

**Program of the Aspen Center Condensed Matter Physics Conference
January 3-9, 1993**

"Collective Dynamics in Disordered Systems"

Monday , Jan 4:

8AM: D. Fisher : *Collective transport in random media*

R. Thorne : *Finite size effects in charge density wave conductors*

M. Weissman : *New probes of metastable states in charge density waves*

5PM: A. Middleton : *Looking at charge density waves through numerical glasses*

M. Sherwin : *Delayed conduction and low-dimensional chaos in switching charge density wave conductors*

Tuesday, Jan 5 :

8AM: O. Narayan : *Nonlinear fluid flow in random media*

S. Stepanow : *Dynamics of interface depinning in a disordered medium*

J. Stokes : *Interface structure and dynamics in porous media*

5PM: M. Cieplak : *Critical phenomena in fluid invasion and magnetic domain wall motion*

F. Family : *Surface growth with generalized nonlinearities*

Wednesday, Jan 6 :

8AM: J.M. diMeglio : *Contact line motion on nonideal surfaces*

S. Coppersmith : *Defects in driven random elastic media*

S. Brown : *Thermodynamics and transport in the spin density wave conductor
(TMTSF)₂PF₆*

Public lecture :

S. Nagel : *Relaxation at the angle of repose : do avalanches explain the fractal
nature of the universe ?*

Thursday, Jan 7 :

8AM: I. Ruzin : *Pinning in Wigner crystals by charged impurities*

E. Andrei : *Transport and radio frequency measurements on the magnetically induced solid*

R. Willett : *Surface acoustic wave study of the electron solid regime*

5PM: X-L Wu : *Critical fluctuations of binary liquid mixtures and liquid crystals in disordered media*

G. Grinstein : *Coherent periodic oscillations in nonequilibrium classical systems*

Friday, Jan 8:

8AM: Z. Tesanovic : *Fluctuations and correlations in dense vortex matter*

M. Charalambous : *Probing flux lattice melting in high temperature superconductors*

P. Gammel : *Order and disorder in the flux line lattice*

5PM: W. Kwok : *Flux line pinning by 2-d correlated defects in single crystal YBCO*

J. Graybeal : *Direct observation of vortex decoupling in layered superconductors*

Saturday, Jan 9 :

8AM: S. Girvin : *Numerical simulations of vortex glass dynamics*

R. Westervelt : *To be announced*

S. Nagel : *Sound in sand*

1993 Aspen Winter Physics Conference
Condensed Matter Physics
Participant List

Abrahams, Elihu (Rutgers U.)

Balatsky, Alexander (Los Alamos Nat Lab)

Bhattacharya, Shobo (NEC Research Inst.)

Charalambous, Melissa (IBM)

Coppersmith, Susan (AT&T Bell Laboratories)

Duran, Carlos (AT&T Bell Laboratories)

Ferrell, Richard A. (U. of Maryland)

Franz, Silvio (Ecole Normale Supérieure)

Girvin, Steven (Indiana U.)

Graybeal, John (MIT)

Higgins, Mark J. (NEC Res. Inst.)

Le Doussal, Pierre (Physics)

Li, Q. Peter (U. of Wisconsin-Madison)

Middleton, Alan (NEC Res. Inst.)

Narayan, Quntum (Harvard U.)

Phillips, J. C. (AT&T Bell Labs.)

Robbins, Mark (Johns Hopkins U)

Sherrington, David (U. of Oxford)

St. Peters, Margaret (Mankato State U.)

Stokes, James P. (Exxon Res. & Eng. Co.)

Thorne, Robert (Cornell U.)

Weissman, Michael B. (U. of IL at Urbana)

Willett, Robert L. (AT&T Bell Labs.)

Zimanyi, Gergely T. (U. of CA, Davis)

Andrei, Eva (Rutgers U)

Bergmann, Gerd (U. Southern CA)

Brown, Stuart (UCLA)

Cieplak, Marek (Polish Academy of Sciences)

Di Meglio, Jean-Marc (College de France)

Family, Fereydoon (Emory University)

Fisher, Daniel (Harvard U.)

Gammel, Peter L. (AT&T Bell Laboratories)

Goldman, Allen M. (U. of Minnesota)

Grinstein, Geoffrey (IBM, T. J. Watson Res. Ctr.)

Kwok, Wai-Kwong (Argonne Nat. Lab.)

Levy, Jeremy (UCSB)

Liebenberg, Donald (Ofs. of Naval Res.)

Nagel, Sidney R. (U. of Chicago)

Nori, Franco (U. of Michigan)

Quader, Khandker (Kent State U.)

Ruzin, Igor (U. of Minnesota)

Sherwin, Mark (UCSB)

Stepanow, Semjon (U. zu Koln)

Tesanovic, Zlatko (Johns Hopkins U.)

Vinokur, Valerie (Argonne Nat. Lab.)

Westervelt, Robert M. (Harvard U.,)

Wu, Xiao-Lun (U. of Pittsburgh)