### **9<sup>TH</sup> INTERNATIONAL CONFERENCE ON DISCRETE SIMULATION OF FLUID DYNAMICS**

# Conference Report

## Santa Fe, U.S.A. August 21<sup>st</sup> - 21<sup>™</sup>, 2000



Figure 1: Burros (Courtesy Museum of New Mexico)



Figure 2: Santa Fe's historic La Fonda was built in 1922 and is known for its award-winning Spanish pueblo style.

The "9th International Conference on Discrete Simulation of Fluid Dynamics" was held in Santa Fe, New Mexico, USA, August 21st through 24th, 2000. This conference brought together leading researchers with broad fluid dynamics backgrounds to address the theoretical, modeling, and simulation issues of discrete simulation. The conference objectives were to provide a forum to exchange and to stimulate new ideas cross disciplines and to formulate new and challenging problems that will have important physical and industrial impact. The subject of this conference was the microscopic and mesoscopic modeling and simulation of complex fluid flow phenomena, including turbulence, multi-phase flows, chemically reacting flows, combustion, non-Newtonian flows, and other complex fluid flows. The conference also covered several research frontiers, including quantum computing, granular fluids, and molecular dynamics. Additional topics were theories of mesoscopic modeling and many applications of the lattice gas and lattice Boltzmann methods. The proceedings from this conference will be published in 2001 in the Journal of Statistical Physics.

Highlights of the conference included multiphase flows and phase transitions. On the forefront of multi-fluid flows, there were studies of Rayleigh-Taylor instability and associated chaotic mixing, bubbly flow and associated closure laws, suspension flow of many particles, liquid crystal hydrodynamics, etc. On the phasetransition front, were studies of solidification and interdendritic flows, spinodal decomposition of binary flows, and micro channel flows near the critical point.

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Info: The current La Fonda was built in 1922 on the site of the previous inns. In 1925 it was acquired by the Atchison, Topeka Santa Fe Railroad which leased it to Fred Harvey. For more than 40 years, from 1926 to 1968, La Fonda was one of the Harvey Houses, a renowned chain of fine hotels. Since 1968, La Fonda has been locally owned and operated and has continued the same tradition of providing warm hospitality, excellent service and modern amenities while maintaining historic integrity and architectural authenticity.



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