

Figure E-21 H/D = 40, Medium sand, tan $\phi_{\mu} = 3.0$

E-14 07/05/05

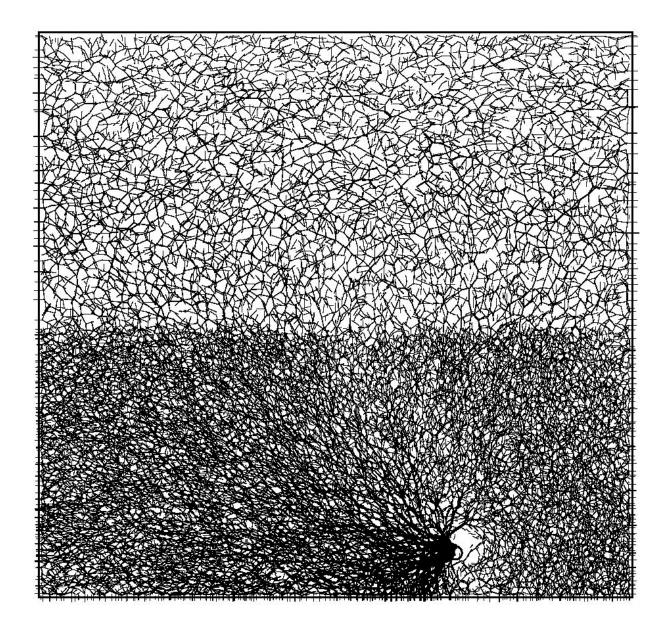


Figure E-22 H/D = 40, Dense sand, tan $\phi_{\mu} = 3.0$

E-15 07/05/05

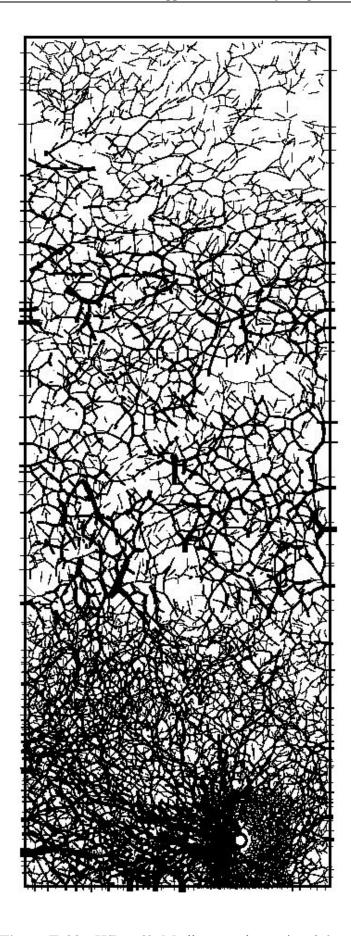


Figure E-23 H/D = 60, Medium sand, tan $\phi_{\mu} = 3.0$

E-16 07/05/05

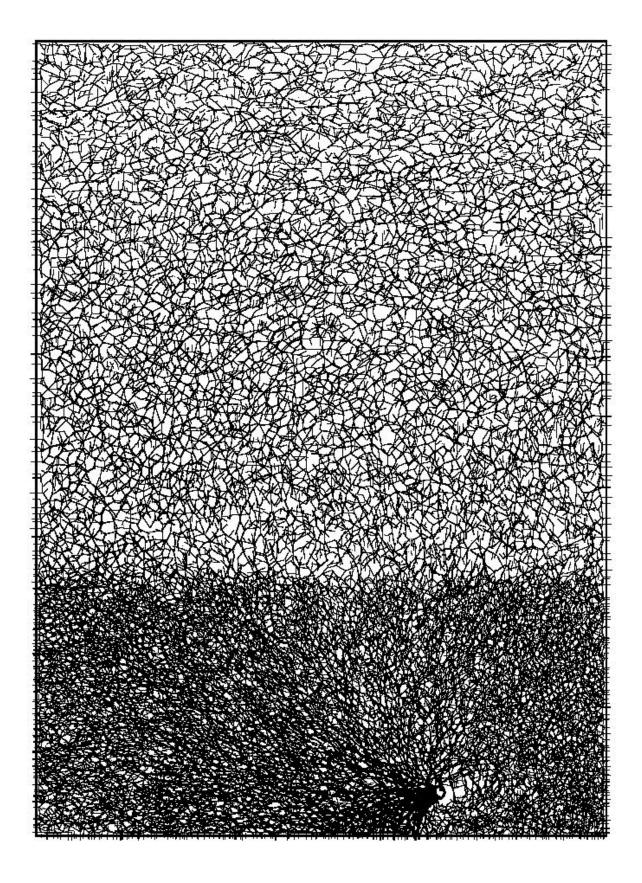


Figure E-24 H/D = 60, Dense sand, tan $\phi_{\mu} = 3.0$

E-17 07/05/05

Appendix F

Contact Force Pattern under Upward Loading

F-1 07/05/05

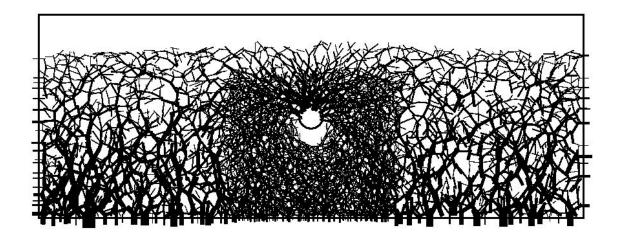


Figure F-1 $H_c/D = 4$, Dense sand, $\tan \phi_{\mu} = 3.0$

F-2 07/05/05

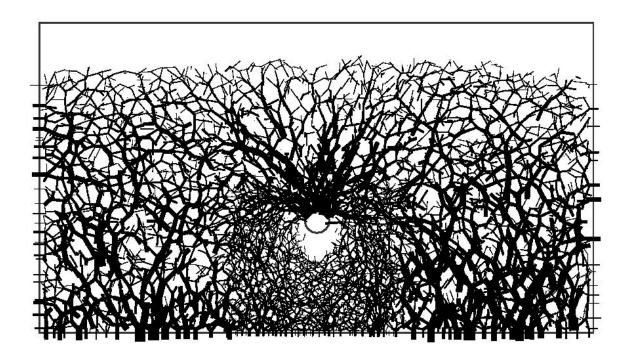


Figure F-2 $H_c/D = 8$, Medium sand, $\tan \phi_{\mu} = 3.0$

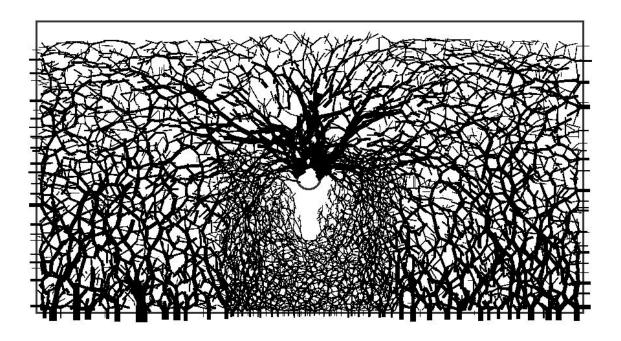


Figure F-3 $H_c/D = 8$, Dense sand, $\tan \phi_{\mu} = 3.0$

F-3 07/05/05

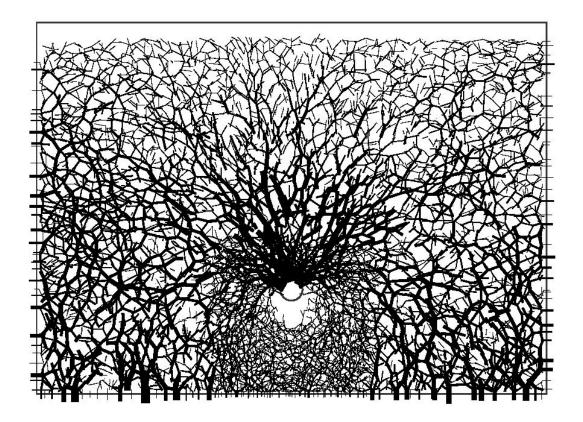


Figure F-4 $H_c/D = 13$, Medium sand, tan $\phi_{\mu} = 3.0$

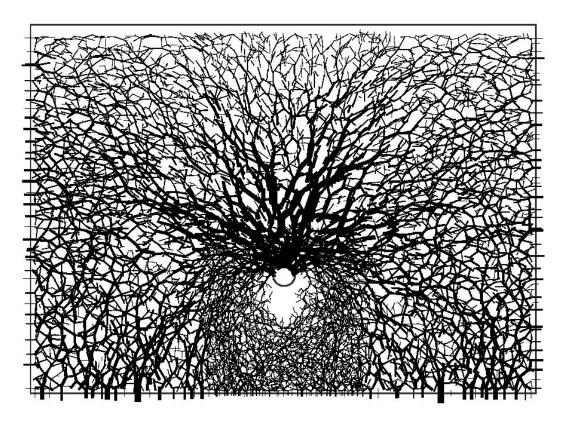


Figure F-5 $H_c/D = 13$, Dense sand, $\tan \phi_{\mu} = 3.0$

F-4 07/05/05