

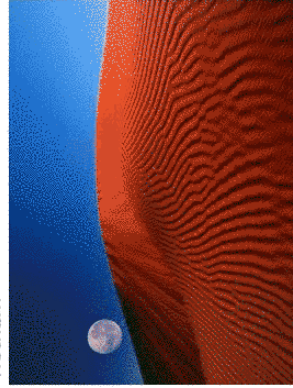
sand of changes: granular zen

kitp, granular physics conference, june 22 05

jean-pierre hébert

with david bothman, victor dinovi, iannis zannos

vietnam



hawai

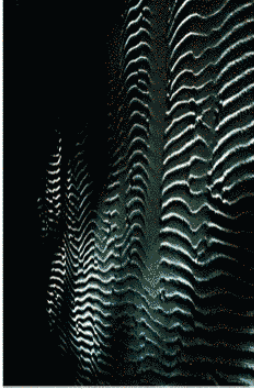


white sands

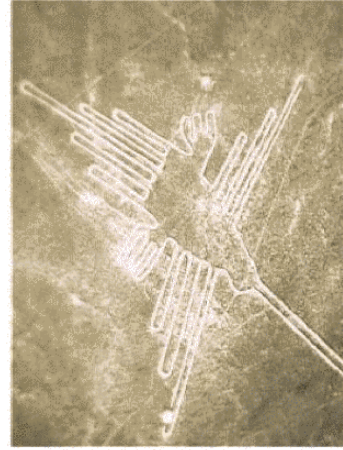
gobi



arizona



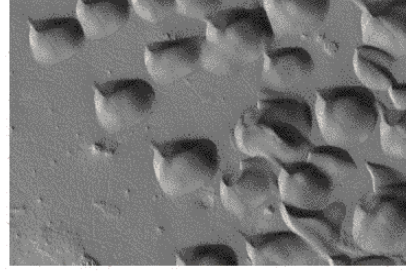
sahara



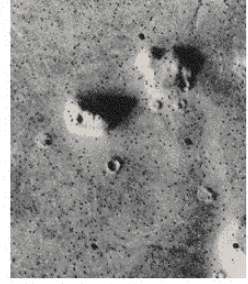
nazca



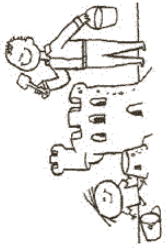
isamu noguchi's sculpture to be seen from mars



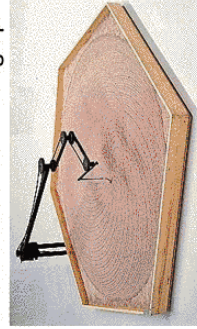
mars dunes



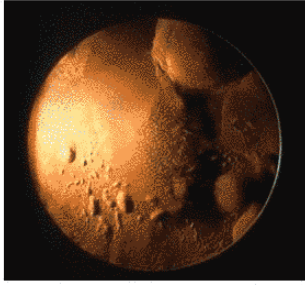
nasa's face on mars



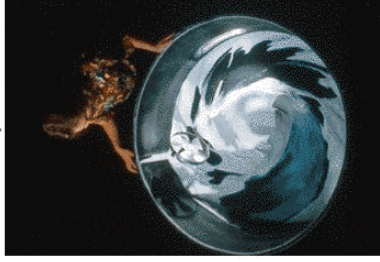
osmo valtonen's circulograph



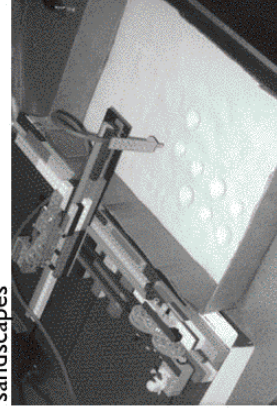
earthquake trace



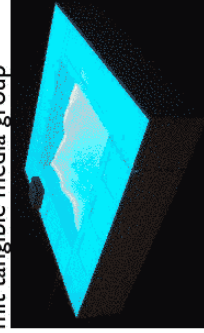
SF exploratorium



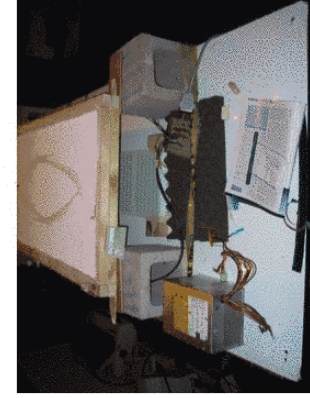
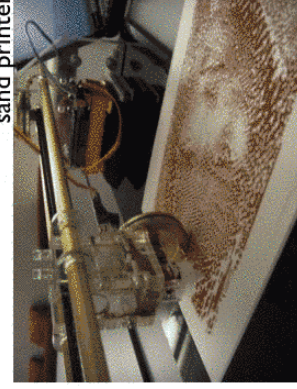
sandscapes



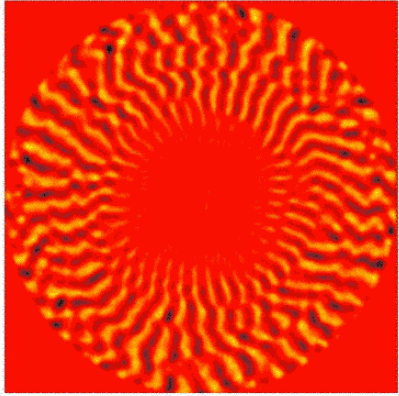
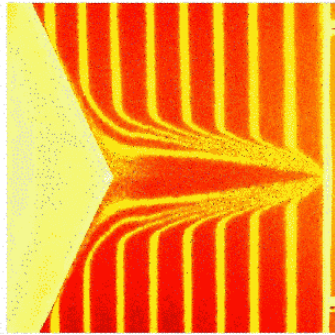
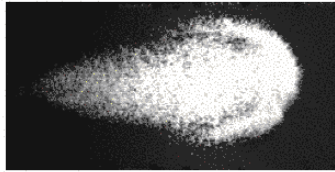
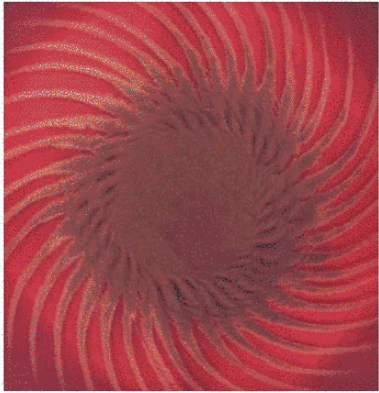
mit tangible media group



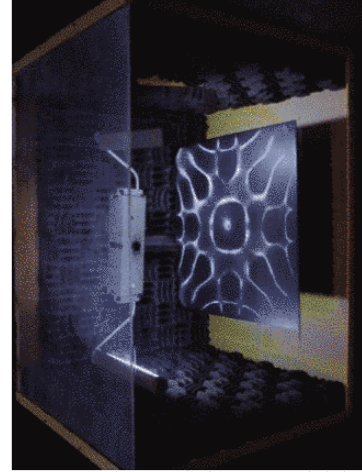
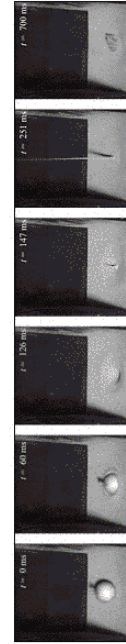
sand printer



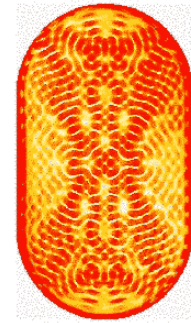
tetazoo LQ1050

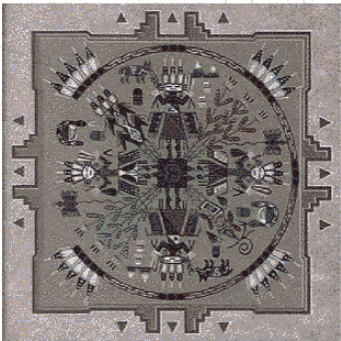
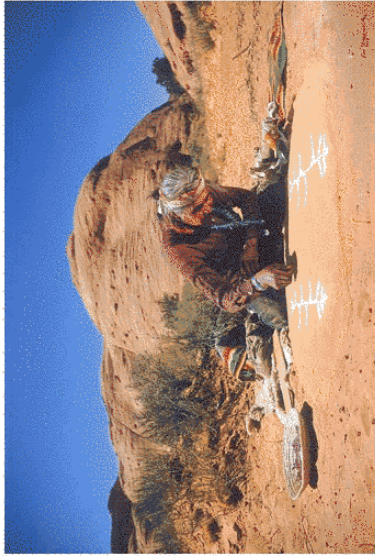


kitp granular matter program



chladni patterns

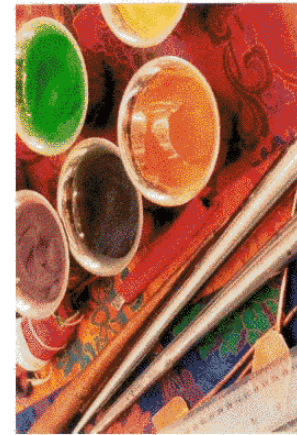


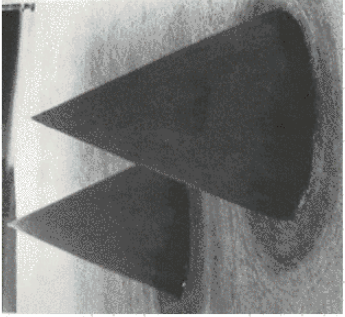


navajos



tibet

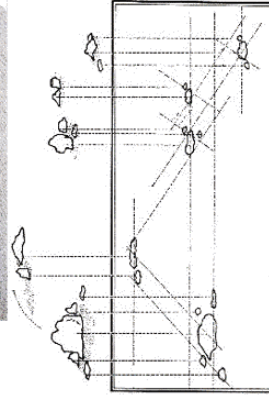




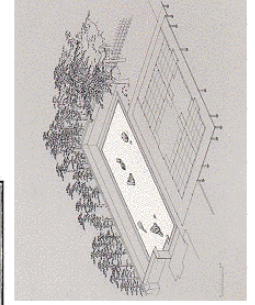
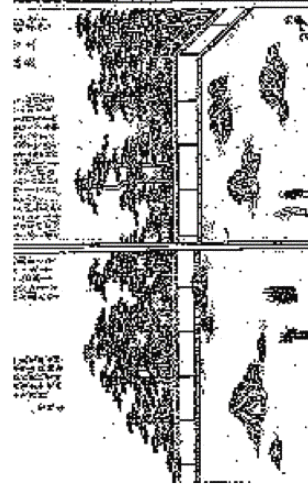
kamigamo



kogetsugai

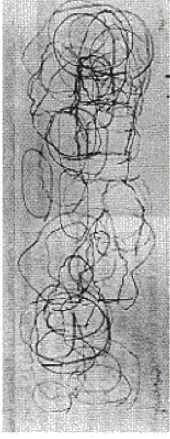
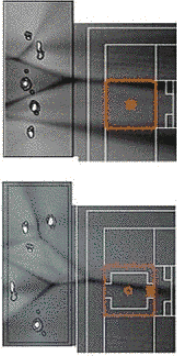


ryoanji





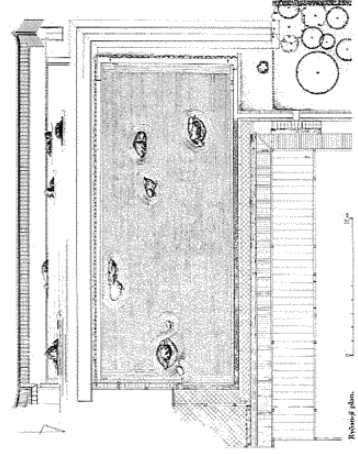
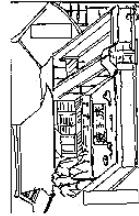
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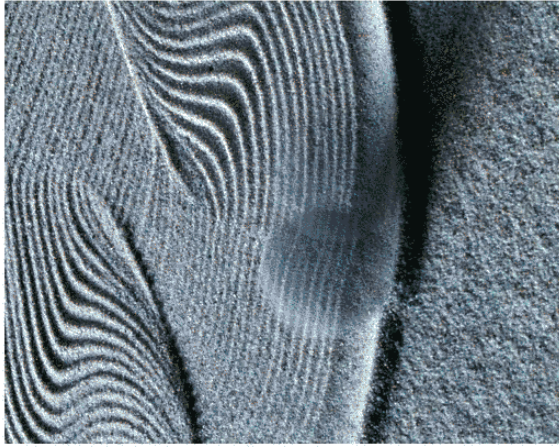


john cage

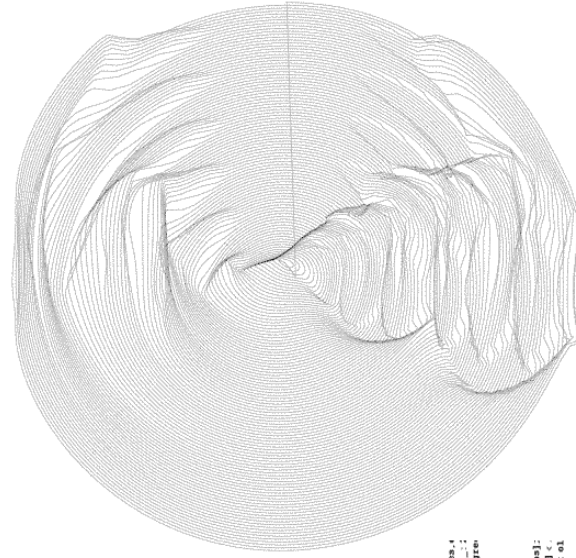


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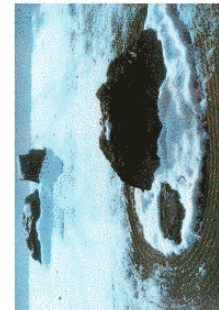
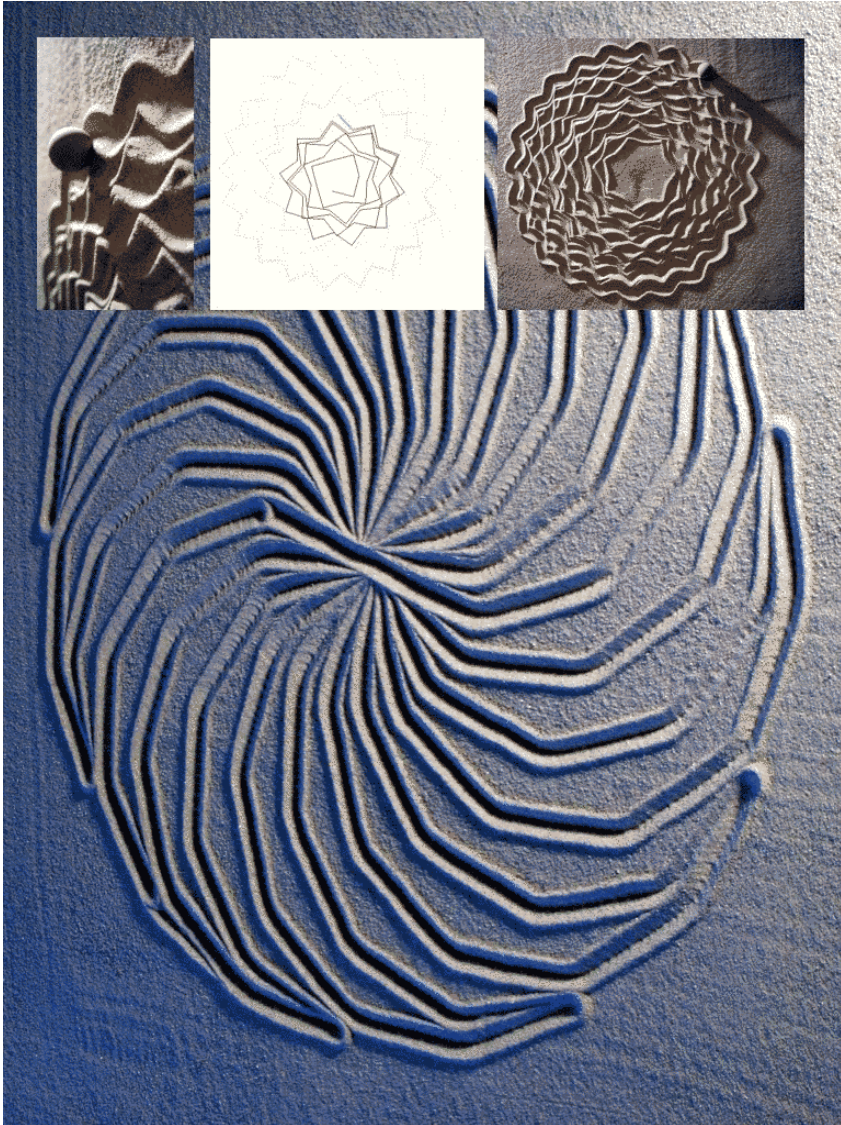




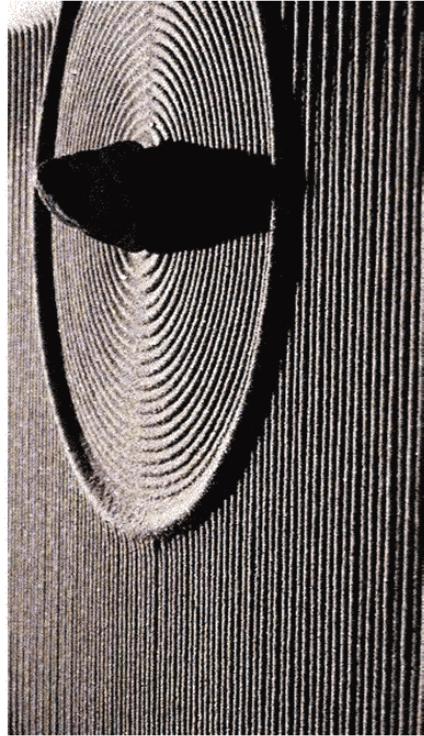
daisenin



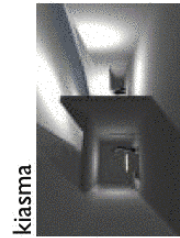
```
(center and normalize, rotate 22 degrees,
 toRayList_list, fname, 'last_xy', alpha,
 Module[Col - M[list], cos - M[ConstantBare
   {x, y}, 10, 1, {}],
 (* first, rotate *)
 If[alpha > 0,
   Do[ra = col[[1, 1]]; r = col[[1, 2]];
     If[ra < 0, r = -r, r = r];
     If[Abs[r] < 0.005, r = 0]; If[Abs[r] <
       1 - (1 - (r, r)), (1, 1, Length[ol]); ol
     (* find scaling parameters *)
     Do[ra = col[[1, 1]]; r = col[[1, 2]];
       If[Abs[ra] < 0.005, ra = 0];
       If[Abs[r] < 1 - (1 - (r, r)), (1, 1,
         Length[ol]); ol = ol - 1;
       If[r > 0, ra = r]; If[r < 1, r = 1,
         r = -5 (ex - 1); r = -5 (ey - 1); rmax =
         rmax + Abs[r];
       ra = Abs[ra]; copy;
     Do[ra = col[[1, 1]]; cx = r/rq; r = col[[1, 2]
       If[Abs[r] < 0.005, r = 0]; If[Abs[r] < 4
         - (1 - (r, r)), (1, 1, Length[ol]);
         ol = ol - 1;
       (* double check *)
```



ryoanji

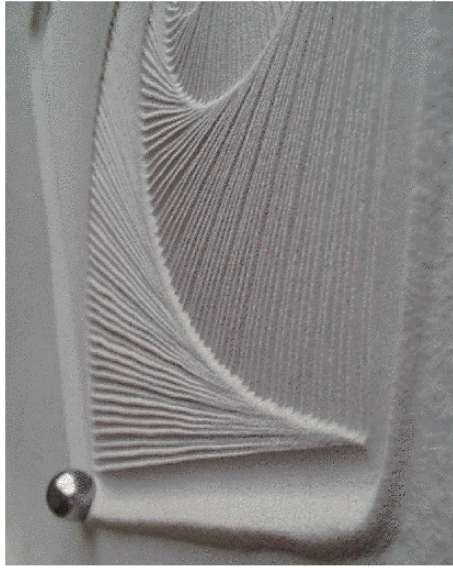


daisenin

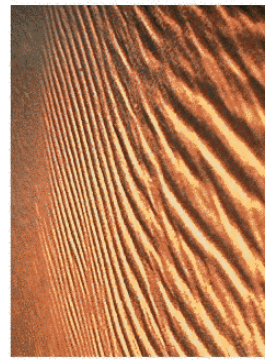


kiasma

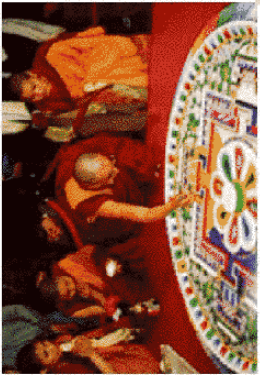




ryoanji



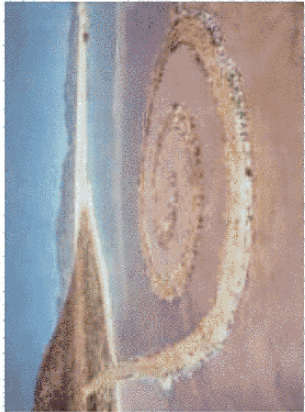
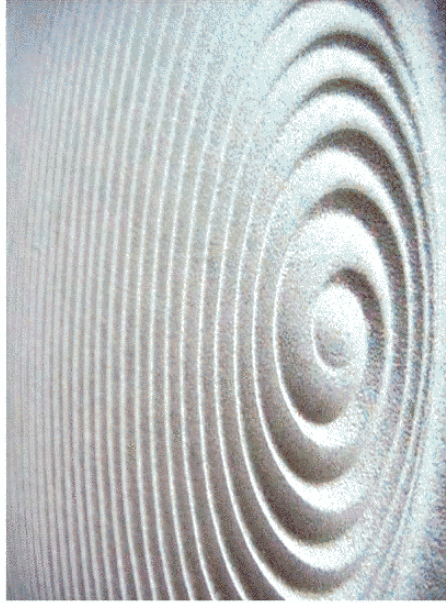
ripple marks



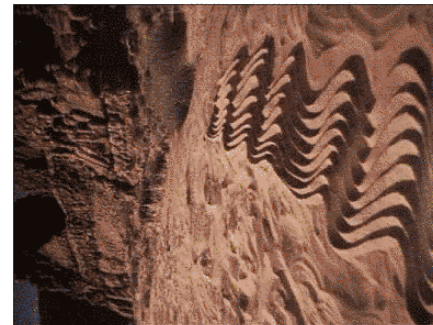
dalai lama
kalashakra initiation



michael heizer

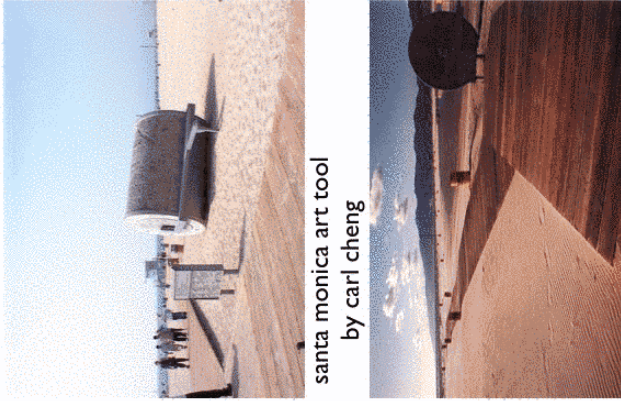


robert smithson

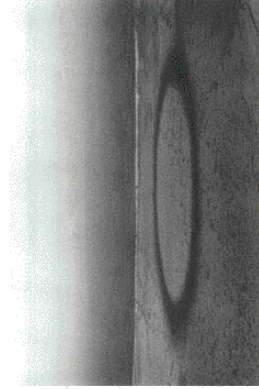


andy goldsworthy

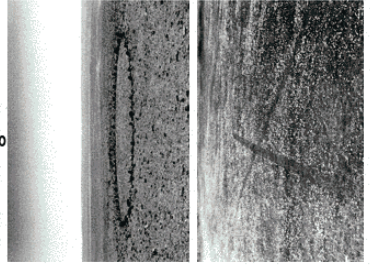


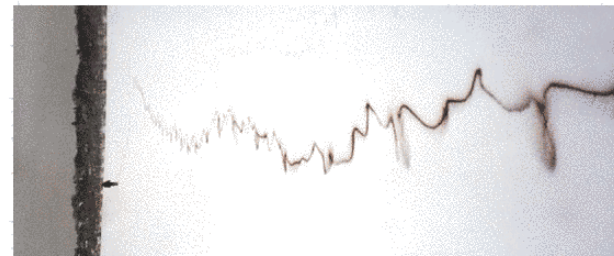
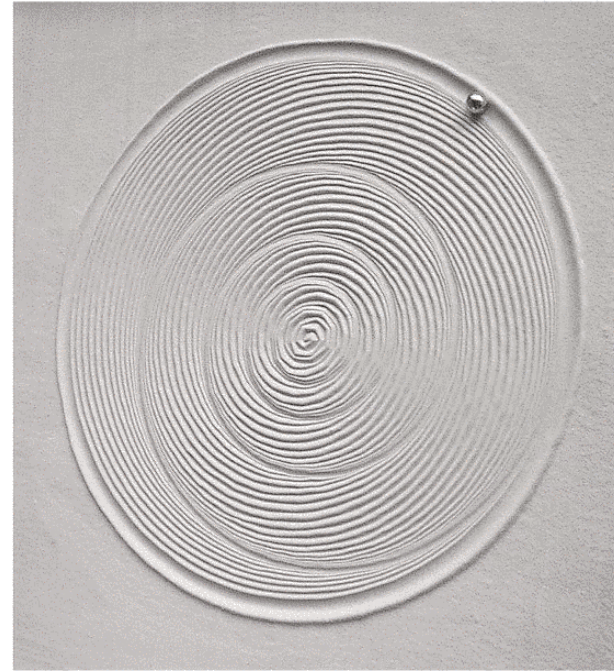
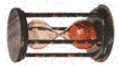


santa monica art tool
by carl cheng



richard longman





gerry smith &
bernhard huwiler

instances





observations
sand and sand
powders
ball motion
segregation



