(W)olves – 'The Mortal Instruments: City of Bones' (2013)
The wolf shots in TMI required distinctive grooms for roughly 10 wolves. Working closely with the assigned lighters, I added finer, and more useable controls to Houdini's standard fur setup, as well as presets for each wolf that could be loaded and updated. The base groom was made by me, and refined/rendered by a lighter for each wolf.

(P)yroclastic – 'Pompeii' (2014)
This film required a large number of pyroclastic smoke shots. Initially we were unsure of the look, so I began developing it. After several notes to make it 'more dangerous' I started to add glow and interior fire. Since there were roughly 30 ground pyroclastic shots in Pompeii that I was responsible for, I simulated 18 smaller, individual, puffs of pyroclastic smoke with Houdini. The interior glow comes from light emitting particles advected in each smoke puff. These same light particles were used for the instanced ash and embers, and were written out at the initial sim time.
Each puff, and its glow, ember, and ash particles, were linked together and fast instanced onto animated grids. This saved huge amounts of time, and made the smoke more directable than a single large sim per shot. I then created supplementary smoke elements, for further integration with the ground or characters.

(T) - 'The Thing' (2011)
Utilizing a bullet solver created by a fellow TD, I assisted in creating the setup to further break up and simulate the ice surface collapse. I also simmed and rendered all of the snow puffs emitted from the ice surface, as well as all of the falling snow and ice chunks in the interior snowcat breakthrough. The interior shot used millions of delayed load points to represent snow and chunks.

(H) - 'Hot Tub Time Machine' (2010)
As studio machines at the time had small amounts of ram, we were struggling to render this vortex mesh from Realflow. I created a Houdini tool to cut up the mesh into delayed loadable pieces so it could be rendered. I also created the mist, paper, spray, and aerial snow elements in Houdini.

(R) - 'Resident Evil: Retribution' (2012)
During the majority of production for this film, I was tasked with creating work flow and render farm submission tools for Realflow. These tools allowed artists to easily setup scenes, change export paths, and submit simulations to the farm. To test these, I worked on this shot, in which I simulated the water core, foam, and splash particles. I also simulated the roof collapse, and the dust for the cab crush with Houdini.

(S) - 'Silent Hill: Revelation' (2012)
In these face peeling shots, I used a PhysX cloth solver developed by another TD to represent skin. For the road shot, all dust and peeling flakes were simulated, lit, and rendered in Houdini as particles or instanced geometry.

(D)emon Smoke - 'The Mortal Instruments: City of Bones' (2013)
I was responsible for the smoke emitted from the demons in these shots. It was simulated with a proprietary solver, and lit and rendered in Houdini with mantra.

(M) - 'The Three Musketeers' (2011)
After experimenting with Houdini Pyro, I devised a series of test sims via FumeFX, and pitched to have it adapted as our studio solution for smoke and fire. I then aided in the integration and setup of a small Fume farm, while completing the smoke in this title card shot.