

**Homework 3: Saving Derek Zoolander**

DUE: Wednesday, Feb. 12, 2015

GQ is doing a feature article on VH1's 3-time male model of the year **Derek Zoolander** (NOTE: If you haven't watched this movie, then that is part of your homework too). Much to every beautiful person's dismay, the ridiculously good looking photos of Derek have created a crisis. First, ugly protesters against the fashion industry sweat shops in Eurasia have corrupted Derek's touch-upped photos (download derek1.jpg and derek2.jpg). The only remaining photos are when Derek had a rash near his nose (download derek3.jpg and derek4.jpg).

Help save Derek's male modeling career!

**task 1:** Use filtering to try to clean up the corrupted images of Derek. Filter both the black and white image and the three levels of the RGB data of the color picture.

**task 2:** Use diffusion to locally try to remove Derek's rash. You could potentially use both diffusion and filtering to get the best image quality. Again, you now have three diffusion equations to solve for the three levels of the color picture.

*WE LOVE YOU DEREK!*