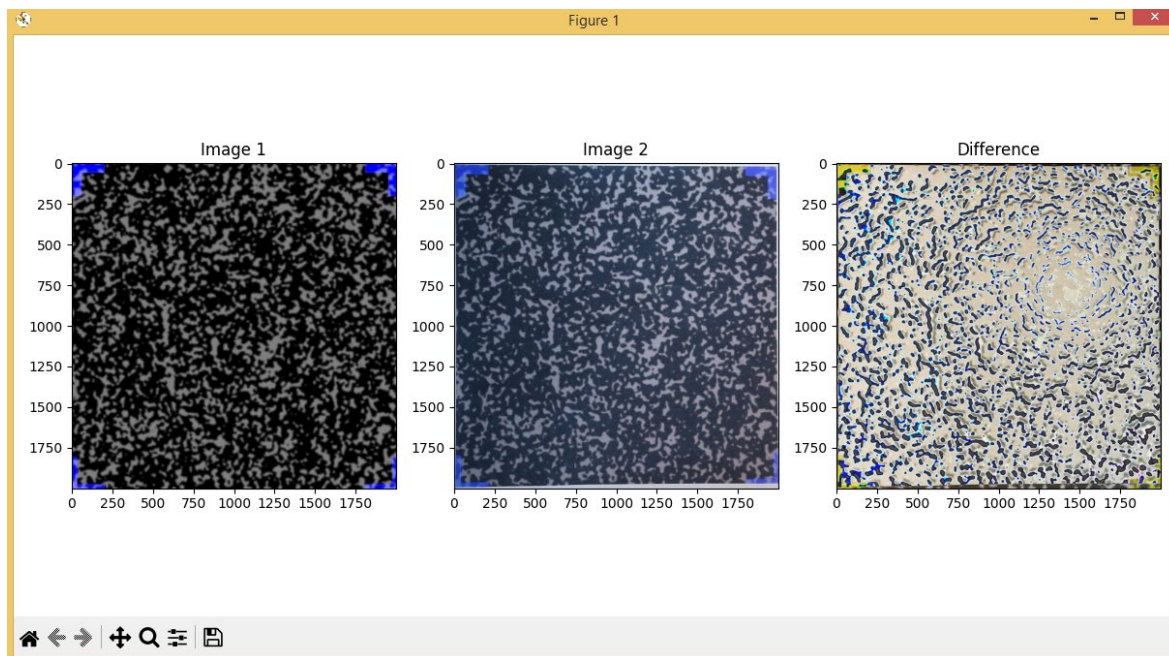


Final Project - DIC Error Estimation

By: Jose Luis Martinez Torres

This report presents some test cases for images with and without lighting as related to the DIC error estimation.

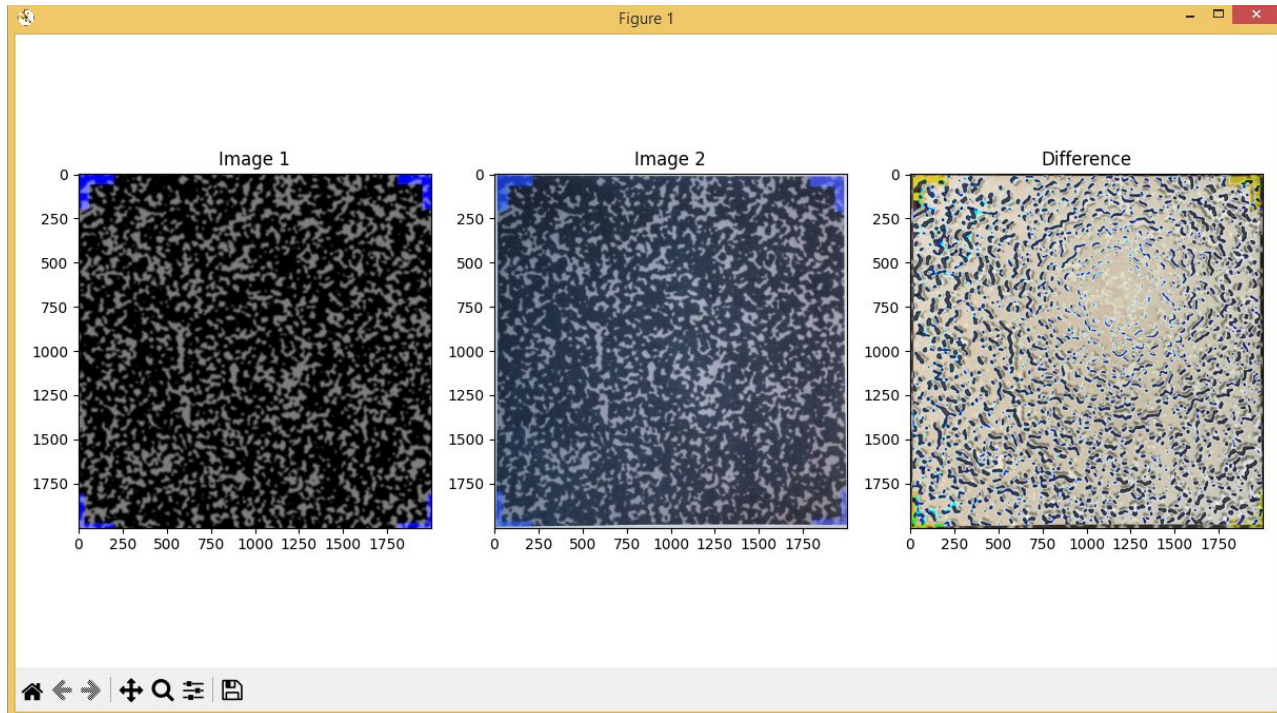
Source Image – Lighting_Center.jpg



```
Enter your choice (1 or 2): 2
Mean Square Error (MSE): 13563.2864295
Residuals:
[[161 158 156 ... 190 190 190]
 [159 157 156 ... 190 189 188]
 [155 156 157 ... 190 190 189]
 ...
 [201 202 201 ... 169 169 170]
 [197 201 201 ... 171 169 168]
 [197 201 200 ... 172 172 172]]
Least-Squares Regression:
[[ 65 132 16 ... 4 4 4]
 [193 73 16 ... 4 137 16]
 [217 16 73 ... 4 4 137]
 ...
 [209 100 209 ... 145 145 228]
 [153 209 209 ... 57 145 64]
 [153 209 64 ... 144 144 144]]

Process finished with exit code 0
```

Source Image – Lighting_from_left.jpg



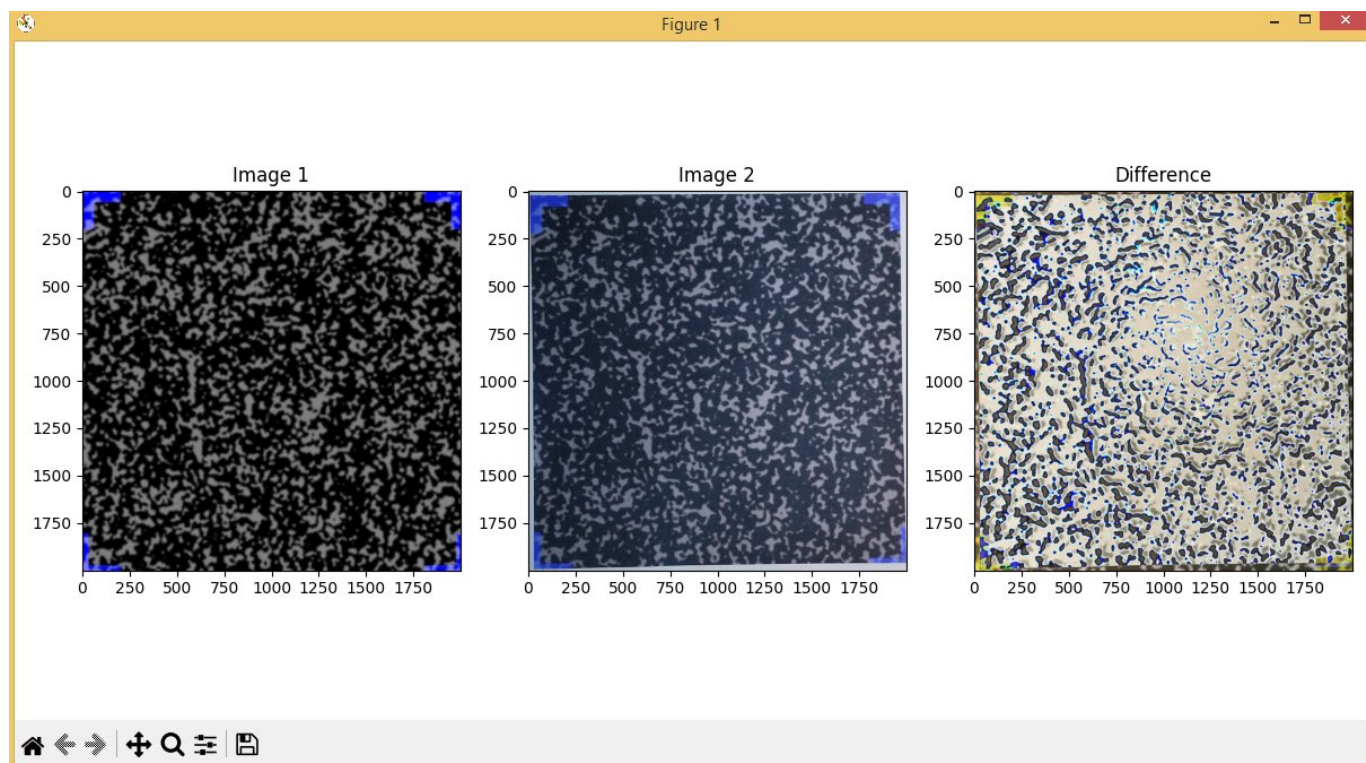
```

Enter your choice (1 or 2): 2
Mean Square Error (MSE): 14591.51147925
Residuals:
[[157 154 155 ... 203 202 203]
 [158 156 157 ... 203 202 202]
 [157 157 157 ... 202 201 202]
 ...
 [180 180 182 ... 165 166 165]
 [181 179 181 ... 164 165 165]
 [181 179 180 ... 165 167 166]]
Least-Squares Regression:
[[ 73 164 217 ... 249 100 249]
 [132  16  73 ... 249 100 100]
 [ 73  73  73 ... 100 209 100]
 ...
 [144 144 100 ...  89 164  89]
 [249  41 249 ...  16  89  89]
 [249  41 144 ...  89 241 164]]

Process finished with exit code 0

```

Source Image – Lighting_from_right.jpg



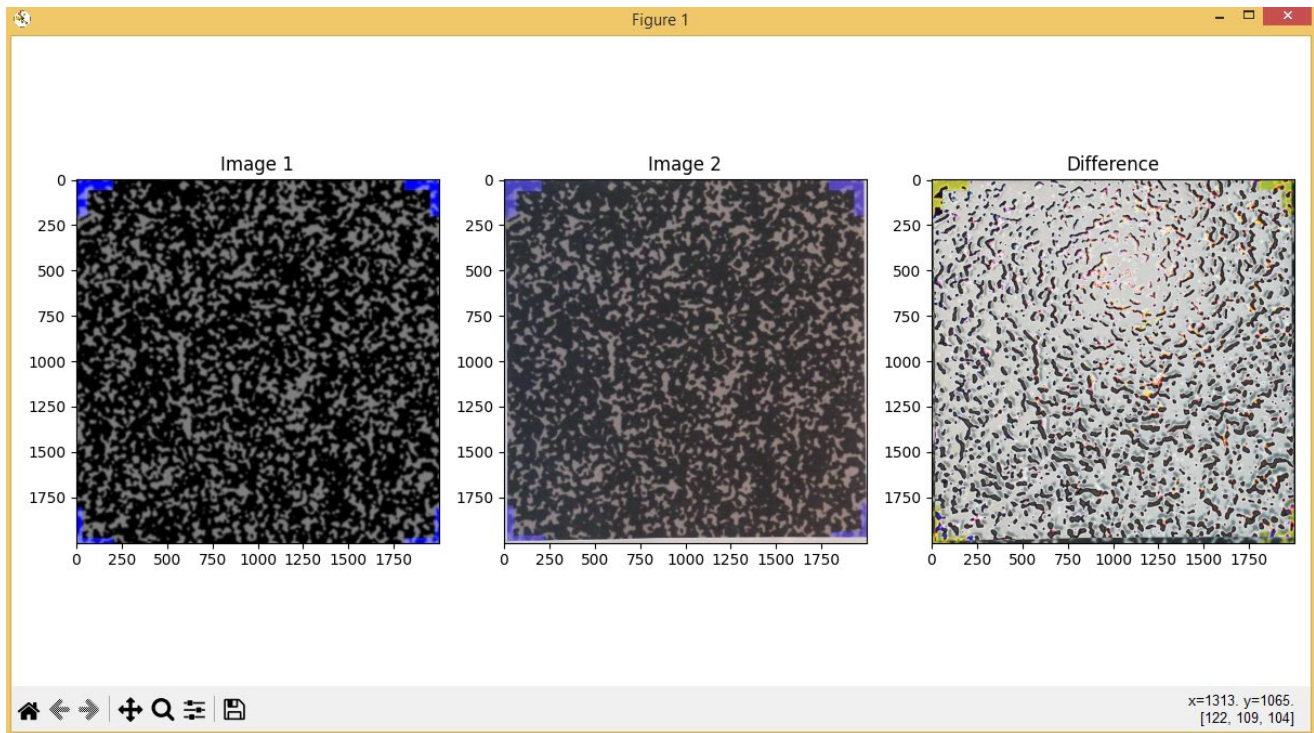
```

Enter your choice (1 or 2): 2
Mean Square Error (MSE): 14278.4837875
Residuals:
[[176 177 178 ... 205 205 205]
 [176 176 177 ... 205 205 205]
 [176 177 177 ... 205 205 205]
 ...
 [214 213 212 ... 166 166 166]
 [215 214 214 ... 165 165 166]
 [215 214 216 ... 165 166 166]]
Least-Squares Regression:
[[ 0  97 196 ... 41 41 41]
 [ 0   0  97 ... 41 41 41]
 [ 0  97  97 ... 41 41 41]
 ...
 [228  57 144 ... 164 164 164]
 [145 228 228 ...  89  89 164]
 [145 228  64 ...  89 164 164]]

Process finished with exit code 0

```

Source Image – No_lighting.jpg



```

Enter your choice (1 or 2): 2
Mean Square Error (MSE): 10956.27748125
Residuals:
[[139 145 142 ... 210 210 209]
 [143 139 138 ... 213 212 212]
 [140 136 145 ... 213 212 212]
 ...
 [174 177 176 ... 163 163 162]
 [174 177 177 ... 163 162 162]
 [175 179 179 ... 161 161 162]]
Least-Squares Regression:
[[121 33 196 ... 68 68 161]
 [225 121 100 ... 57 144 144]
 [144 64 33 ... 57 144 144]
 ...
 [ 68 97 0 ... 201 201 132]
 [ 68 97 97 ... 201 132 132]
 [161 41 41 ... 65 65 132]]

Process finished with exit code 0

```