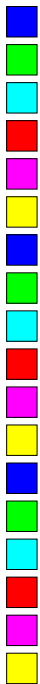
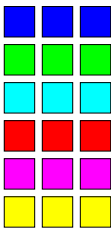


Laplacian operator

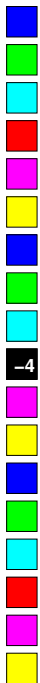
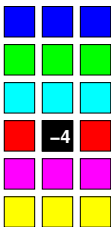
Paul Sava

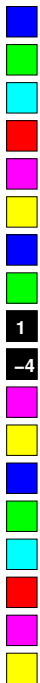
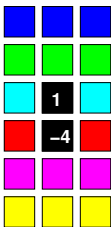
**Center for Wave Phenomena
Colorado School of Mines
psava@mines.edu**

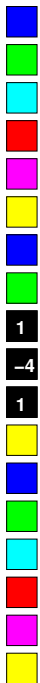
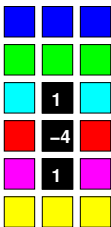
unwrap array



build filter







| | | |
|---------|--------|---------|
| Blue | Blue | Blue |
| Green | Green | Green |
| Cyan | 1 | Cyan |
| 1 | -4 | Red |
| Magenta | 1 | Magenta |
| Yellow | Yellow | Yellow |

| |
|---------|
| Blue |
| Green |
| Cyan |
| 1 |
| Magenta |
| Yellow |
| Blue |
| Green |
| 1 |
| -4 |
| 1 |
| Yellow |
| Blue |
| Green |
| Cyan |
| Red |
| Magenta |
| Yellow |

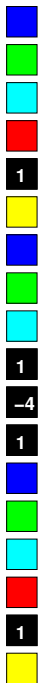
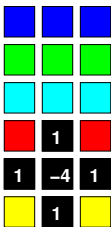
| | | |
|---------|--------|---------|
| Blue | Blue | Blue |
| Green | Green | Green |
| Cyan | 1 | Cyan |
| 1 | -4 | 1 |
| Magenta | 1 | Magenta |
| Yellow | Yellow | Yellow |

| |
|---------|
| Blue |
| Green |
| Cyan |
| 1 |
| Magenta |
| Yellow |
| Blue |
| Green |
| 1 |
| -4 |
| 1 |
| Yellow |
| Blue |
| Green |
| Cyan |
| 1 |
| Magenta |
| Yellow |

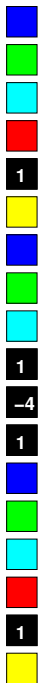
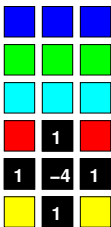
move filter

| | | |
|---|----|---|
| ■ | ■ | ■ |
| ■ | ■ | ■ |
| ■ | 1 | ■ |
| 1 | -4 | 1 |
| ■ | 1 | ■ |
| ■ | ■ | ■ |

| |
|----|
| ■ |
| ■ |
| ■ |
| 1 |
| ■ |
| ■ |
| 1 |
| -4 |
| 1 |
| ■ |
| ■ |
| ■ |
| 1 |
| ■ |
| ■ |



setup boundaries

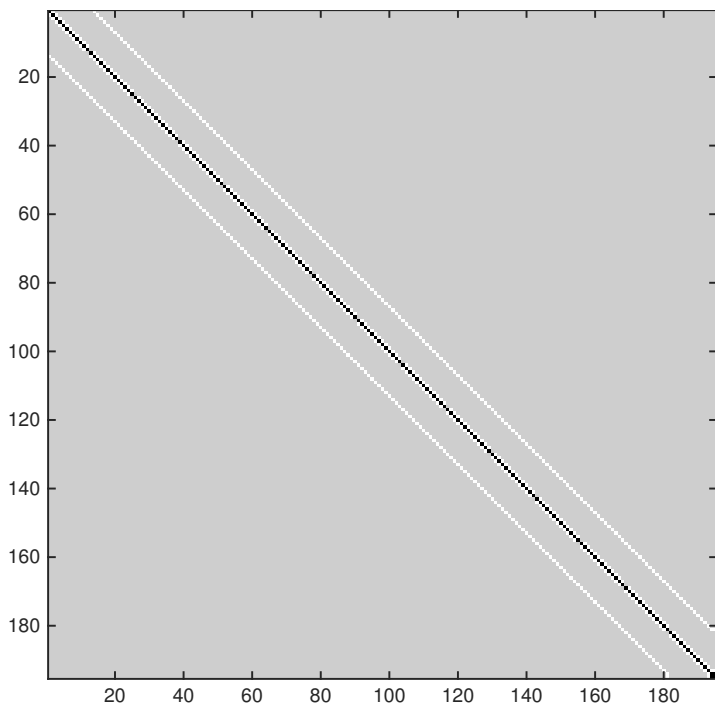


| | | |
|---------|-------|---------|
| Blue | Blue | Blue |
| Green | Green | Green |
| Cyan | Cyan | Cyan |
| Red | Red | Red |
| Magenta | 1 | Magenta |
| 1 | -4 | 1 |

| | | |
|---------|---------|-------|
| Blue | Blue | Blue |
| Green | Green | Green |
| Cyan | Cyan | Cyan |
| Red | Red | Red |
| Magenta | Magenta | 1 |
| Yellow | 1 | -4 |

| |
|---------|
| Blue |
| Green |
| Cyan |
| Red |
| Magenta |
| Yellow |
| Blue |
| Green |
| Cyan |
| Red |
| Magenta |
| 1 |
| Blue |
| Green |
| Cyan |
| Red |
| 1 |
| -4 |

Laplacian operator



impulse response

