

Equations for presentation

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$$  
\mathcal{C}[a,b]  
$$
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$$  
\mathbf{\epsilon}:\mathcal{C}[a,b] \xrightarrow{\hspace{1cm}} \mathbb{R} \\\  
\min_{f \in \mathbb{V}} \mathbf{\epsilon}(f)  
$$
```

J = number of particles(functions) n_iter = number of steps

```
$$  
(f_{ij},\mathcal{W}_{ij}(t),f_{i_{best}j},f_{i_{best}j_{best}}) \\\  
i_{best} = \underset{k \in \{1,2,\dots,i\}}{\operatorname{argmin}} \epsilon(f_{kj}) \\\  
j_{best} = \underset{k \in \{1,2,\dots,J\}}{\operatorname{argmin}} \epsilon(f_{i_{best}k})\\\  
\mathcal{W}_{(i+1)j} = c_1\mathcal{W}_{ij} + c_2(f_{i_{best}j}-f_{ij}) + c_3(f_{best}-f_{ij}) \\\  
f_{(i+1)j} = f_{ij} + \mathcal{W}_{ij} \\\  
$$
```