Adams–Bashforth–Moulton (ABM)
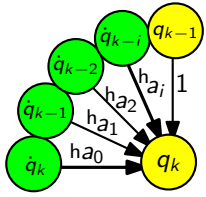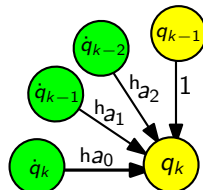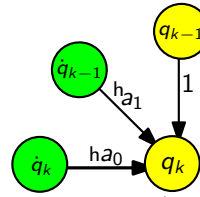
Order m

$q_k = q_{k-1} + h \sum_{i=0}^{m-1} a_i \dot{q}_{k-i}$
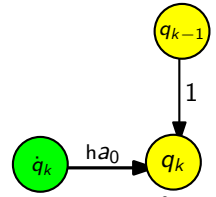
Order 3

$q_k = q_{k-1} + h \sum_{i=0}^{2} a_i \dot{q}_{k-i}$
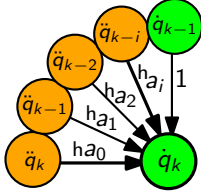
Order 2
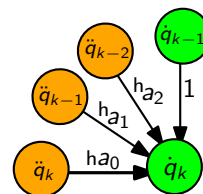
$q_k = q_{k-1} + h \sum_{i=0}^{1} a_i \dot{q}_{k-i}$

Order 1

$q_k = q_{k-1} + h \sum_{i=0}^{0} a_i \dot{q}_{k-i}$

Order m

$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{m-1} a_i \ddot{q}_{k-i}$

Order 3

$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{2} a_i \ddot{q}_{k-i}$

Order 2
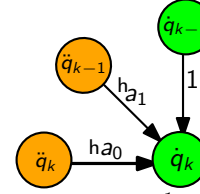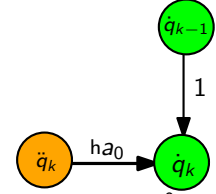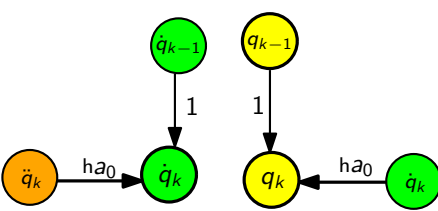
$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{1} a_i \ddot{q}_{k-i}$

Order 1

$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{0} a_i \ddot{q}_{k-i}$
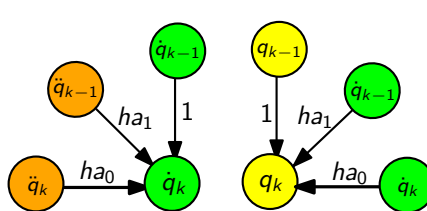
Order 1

$q_k = q_{k-1} + h \sum_{i=0}^{0} a_i \dot{q}_{k-i}$

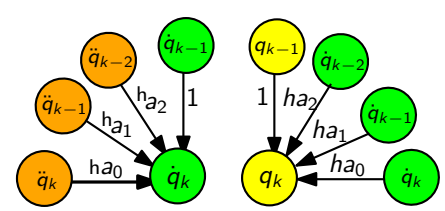$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{0} a_i \ddot{q}_{k-i}$

Order 2

$q_k = q_{k-1} + h \sum_{i=0}^{1} a_i \dot{q}_{k-i}$

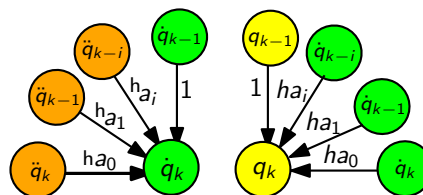$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{1} a_i \ddot{q}_{k-i}$

Order 3

$q_k = q_{k-1} + h \sum_{i=0}^{2} a_i \dot{q}_{k-i}$

$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{2} a_i \ddot{q}_{k-i}$

Order m

$q_k = q_{k-1} + h \sum_{i=0}^{m-1} a_i \dot{q}_{k-i}$

$\dot{q}_k = \dot{q}_{k-1} + h \sum_{i=0}^{m-1} a_i \ddot{q}_{k-i}$

ABM–Graph

Time

$k = 1$, $k = 2$, $k = 3$, $k = 4$, $k = 5$

Order

$m = 0$, $m = 1$, $m = 2$, $m = 3$, $m = 4$

Interpolation
- $i = 0$
- $i = 1$
- $i = 2$
- $i = 3$
- $i = 4$

Previous
- $i = 0$