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## Dynamics of processive and non-processive molecular motors on filaments

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**Abstract content &nbsp; (Max 300 words)<br><a href="http://events.saip.org.za/getFile.py/a" target="\_blank">Formatting &<br>Special chars</a>**

Molecular machines can move along biological filaments in specific directions. This can result in transportation of cargo but also in the motion of the filaments themselves. Such active systems have been the object of intense study in recent years. We present a formalism that is able to address the collective motion of motors along filaments accounting for motors that stay predominantly attached and moving in a certain direction but also motors that detach individually after the power stroke. The model allows for characterisation of the effects when motors might interact with each other on the filament. As an interesting case we also address the possibility of motors in an assay causing twirling of the filament.

**Apply to be<br> considered for a student <br> &nbsp; award (Yes / No)?**

No

**Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD)?**

N/A

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No

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