**Activating Membranes**

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We show that a fluid membrane coupled to treadmilling filaments with active stresses and currents displays the dynamics of an active membrane [as in Phys. Rev. Lett. **84**, 3494 (2000)], with spontaneous shape oscillations and waves. Filaments with polar orientational correlations in the tangent plane of the membrane induce a new class of instabilities and patterns. These predictions should be seen in whole cells as well as in cytoskeletal extracts coupled to synthetic vesicles. Collaborators: Ananyo Maitra (IISc & Univ Paris-Sud), Pragya Srivastava (Syracuse), Madan Rao (RRI/NCBS), Ashwin Pande (NISER) and Rahul Pandit (IISc); some details in [PRL **112**, 258101 (2014)](http://www.google.co.in/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&ved=0CB4QFjAA&url=http%3A%2F%2Flink.aps.org%2Fdoi%2F10.1103%2FPhysRevLett.112.258101&ei=tfUkVZyAA4u2uQS8qICwDg&usg=AFQjCNGNtb-KmTzcxBLi9ZmTeurzgProzw&sig2=Mj7wCGg-T-RATDZ-cxVltg&bvm=bv.90237346,d.c2E).

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