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## Nature-inspired microfluidic propulsion using magnetic artificial cilia

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# List of publications

## Journal publications

- S. N. Khaderi, M. G. H. M. Baltussen, P. D. Anderson, D. Ioan, J. M. J. den Toonder and P. R. Onck, Nature-inspired microfluidic propulsion using magnetic actuation. *Physical Review E*, 2009, **79**, 046304.
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- S. N. Khaderi, C. B. Craus, J. Hussong, N. Schorr, J. Belardi, J. Westerweel, O. Prucker, J. R uhe, J. M. J. den Toonder and P. R. Onck, Magnetically-actuated artificial cilia for microfluidic propulsion. *Lab Chip*, 2011, **11**, 2002–2010.
- S. N. Khaderi, J. M. J. den Toonder and P. R. Onck, Fluid flow in microchannels due to asymmetric and out-of-phase motion of magnetically-actuated artificial cilia. *Journal of Fluid Mechanics*, 2011, accepted.
- S. K. Namdeo, S. N. Khaderi, J. M. J. den Toonder and P. R. Onck, Swimming direction reversal of flagella through ciliary motion of mastigonemes. *Biomicrofluidics*, 2011, accepted.
- S. N. Khaderi, J. M. J. den Toonder and P. R. Onck, Fluid flow due to collective non-reciprocal motion of symmetrically-beating artificial cilia, submitted.
- S. N. Khaderi and P. R. Onck, Implicitly-coupled finite element/boundary element method for the three-dimensional fluid-structure interaction of magnetic artificial cilia, submitted.
- S. N. Khaderi, J. M. J. den Toonder and P. R. Onck, Magnetically-actuated artificial cilia: the effect of fluid inertia and metachrony, submitted.
- S. K. Namdeo, S. N. Khaderi and P. R. Onck, Chirality-induced bi-directional swimming of artificial flagella, submitted.

**Conference proceedings**

- S. N. Khaderi, M. G. H. M. Baltussen, P. D. Anderson, D. Ioan, J. M. J. den Toonder and P. R. Onck, Nature-inspired microfluidic manipulation using magnetic actuators. Materials Research Society Symposium Proceedings, 2007, **1052**, 1052-DD08-06.
- S. N. Khaderi, M. G. H. M. Baltussen, P. D. Anderson, D. Ioan, J. M. J. den Toonder and P. R. Onck, Fluid propulsion in microchannels using magnetically actuated artificial, paper No. FLU08-162, 1<sup>st</sup> European Conference on Microfluidics - Microfluidics 2008.
- S. N. Khaderi, M. G. H. M. Baltussen, P. D. Anderson, D. Ioan, J. M. J. den Toonder and P. R. Onck, Bio-inspired microfluidic propulsion through magnetically-actuated cilia. Materials Research Society Symposium Proceedings, 2009, **1191**, 1191-OO05-12.
- S. K. Namdeo, S. N. Khaderi, J. M. J. den Toonder and P. R. Onck, Swimming direction reversal of flagella through ciliary motion of mastigonemes, paper No. FLU2010-54, 2<sup>nd</sup> European Conference on Microfluidics - Microfluidics 2010.
- S. N. Khaderi, M. G. H. M. Baltussen, P. D. Anderson, D. Ioan, J. M. J. den Toonder and P. R. Onck, Fluid propulsion in microchannels using magnetically-actuated artificial cilia: a bio-mimetic approach, paper No. FLU2010-38, 2<sup>nd</sup> European Conference on Microfluidics - Microfluidics 2010.