Last Update: 09/15/2015

SPP 1726 "Microswimmers" Summer School 2015: Poster Programme

22 September 2015 at 18:00 h in the Seecasino of Forschungszentrum Jülich

[1] Surfaces and features to guide chemical microswimmers

Jaideep Katuri, Juliane Simmchen, Samuel Sanchez[1,2,3]

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[2] The tactic behavior of autonomous biohybrid and synthetic microswimmers

Byung-Wook Park[1], Babak Mostaghaci[1], Oncay Yasa[1], Ahmet Fatih Tabak[1], Ajay Vikram Singh[1], Zeinab Hosseini-Doust[1], Svetlana Zakharchenko[1], Hakan Ceylan[1], Immihan Ceren Garip[1], Yigit Yakupoglu[2], Altug Akay[3], and Metin Sitti[1]

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[3] Photo-induced motion of colloidal particles

D. Feldmann[1] and S. Santer[1]

[1]Universität Potsdam, Potsdam, Germany

[4] Vortex with four-fold defect lines in a simple model of self-propelled particles

H. Seyed-Allaei[1,2], and MR. Ejtehadi[1]

[1]Physics department, Sharif University of Technology, Tehran, Iran, [2]Humboldt University of Berlin, Berlin, Germany

[5] Self-propelled motion of phospholipid aggregate exhibiting undulation of its tubular structure

H. Morohashi [1], T. Toyota[2] and M. Imai[1]

[1]Tohoku University, Aramaki, Aoba, Sendai, Japan, [2]University of Tokyo, Komaba, Meguro, Japan

[6] Fluctuating Lattice Boltzmann simulations of microswimmers

F. Winterhalter[1], M. Marechal[1], and K. Mecke[1]

[1]Friedrich Alexander Universität Erlangen Nürnberg, Erlangen, Deutschland

[7] Active particles moving close and trapped at fluid-fluid interfaces

A. Dominguez[1], M.N. Popescu[2,3], S. Dietrich[2,3] and P. Malgaretti[2,3]

[1]Universidad de Sevilla, Sevilla, Spain, [2]Max Planck Institute for Intelligent Systems, Stuttgart, Germany,[3]IV. Institute for Theoretical Physics University of Stuttgart, Stuttgart, Germany

[8] A Phase Field Crystal Model for Active Particles

F. Alaimo[1] and A. Voigt[1]

[1]Institute of Scientific Computing, TU Dresden, Dresden, Germany

[9] Simulating the Swimming Dynamics of Trypanosoma brucei

Johannes Blaschke[1], Davod Alizadehrad[2], Holger Stark[1]

[1]Institut für Theoretische Physik, Technische Universität Berlin, Berlin, Germany, [2]Forschungszentrum Jülich, Jülich, Germany

[10] Brownian motion near elastic cell membranes. A theoretical study and boundary integral simulations.

A. Daddi-Moussa-Ider[1], A. Guckenberger[1], and S. Gekle[1]

[1]Biofluid Simulation and Modeling, Bayreuth University, Bayreuth, Germany

[11] Dynamics of Collective Cell Motility

Özer Duman, Gerhard Gompper and Jens Elgeti

Institute of Complex Systems, Forschungszentrum Jülich, Jülich

[12] Run-reverse-flick strategy of interacting bacteria

Fabian Schwarzendahl[1], Marco G. Mazza[1], and Stephan Herminghaus[1]

[1]Max Planck Institute for Dynamics and Self-Organization, Göttingen, Germany

[13] Feeding Ducks, Bacterial Chemotaxis, and the Gini Coefficient

F. Peaudecerf[1], and R.E. Goldstein[1]

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[14] Synchronization of Eukaryotic Flagella with an Imposed Periodic Flow

G. Quaranta[1], M.-E. Aubin[2], and D. Tam[1]

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[15] Chemotaxis of Artificial Microswimmers in Active Density Waves

A. Geiseler[1], P. Hänggi[1], F. Marchesoni[2,3], C. Mulhern[1], and S. Savel'ev[4]

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[16] Fabrication of DNA self-assembled nanoswimmers

Ibon Santiago[1] and Andrew J. Turberfield[1]

[1] Department of Physics, University of Oxford, Oxford, United Kingdom

[17] Filtering Self-propelled Particles by a Circular Maze

M. Khatami[1,2], K. Wolff[2], O. Pohl[2], M. R. Ejtehadi[1], and H. Stark[2]

[1]Department of Physics, Sharif University of Technology, Tehran, Iran, [2]Institut für Theoretische Physik, Technische Universität Berlin, Berlin, Germany.

[18] Elastic properties of magnetosome chains

B. Kiani[1], D. Faivre[2], and S. Klumpp[1]

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[19] Intermediate scattering function of a single self-propelled particle

C. Kurzthaler[1], S. Leitmann[1], and T. Franosch[1]

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[20] Hydrodynamic dispersion of microswimmers : effect of Hydodynamic interactions.

M. Martin[1], S. Rafaï[1], and P. Peyla[2]

[1]University Joseph Fourier, Liphy, Grenoble, France

[21] Sorting of micro-swimmers in flowing viscoelastic fluids

A. Mathijssen[1*], A. Doostmohammadi[1], T. Shendruk[1], and J. Yeomans[1]

[1] Rudolf Peierls Centre for Theoretical Physics, University of Oxford, United Kingdom

[22] The Role of Preferential Adsorption on the Hydrodynamics Properties of Droplets Driven by Marangoni Flow

Menglin Li[1], Michael Hein[1], Martin Brinkmann[1], Ralf Seemann[1,2] and Jean-Baptiste Fleury[1]

[1] Experimental Physics, Saarland University, 66123 Saarbrücken, Germany, [2] Max Planck Institute for Dynamics and Self-Organization, 37077 Goettingen, Germany

[23] Fine-structured large deviations and the fluctuation theorem: Molecular motors and beyond

P. Pietzonka, E. Zimmermann, and U. Seifert

II. Institut für Theoretische Physik, Universität Stuttgart, Germany

[24] Active beating of human spermatozoa

G. Saggiorato[1], J. Elgeti[1], J. Jikeli[2], L. Alvarez[2], B. Kaupp[2], and G. Gompper[1]

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[25] Swimming at low Reynolds number: a bead model approach.

B. Bet[1], G. Boosten[2], M.Dijkstra[2], and R. van Roij[1]

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[26] Metachronal waves in a randomly distributed cilia array

S. Dey, D. Donnarumma, G. Massiera, and E. Pitard

[1]Laboraoire Charles Coulomb, Universite Montpellier 2 and CNRS, 34095, Montpellier, Cedex 5, France.

[27] Effects of Shape, Elasticity and Forcing on Micro-swimming

J. Pande[1] and A.-S. Smith[1,2]

[1]Institute for Theoretical Physics and EAM: Cluster of Excellence, University of Erlangen-Nuremberg, Erlangen, Germany, [2]Division of Physical Chemistry, Ruđer Bošković Institute, Zagreb, Croatia

[28] Controlling collective behavior of small groups of gregarious animals.

Luis Gómez[1] and Fernando Peruani[1]

[1]Laboratoire J. A. Dieudonné, Nice, France

[29] Giant Number Fluctuation in an Ordered State of Filamentous Bacteria

D. Nishiguchi[1], K. H. Nagai[2], and M. Sano[1]

[1]Department of Physics, The University of Tokyo, Hongo 7-3-1, Tokyo 113-0033, Japan.
[2]School of Materials Science, Japan Advanced Institute of Science and Technology, Ishikawa 923-1292, Japan.

[30] Self-Assembly of Active Attractive Spheres

V. Prymidis, H. Sielcken and L. Filion

Debye Institute for Nanomaterials Science, Utrecht University, Utrecht, The Netherlands

[31] Spatially Resolved Self-Diffusiophoretic and Self-Electrophoretic Swimming

G. Rempfer[1], M. Kuron[1], P. Kreissl, C. Holm[1], and J. de Graaf[1]

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[32] Sampling moire' and the dynamics of a spreading droplet

R. Shiri[1], A. Najafi[1], and M. Habibi[2]

[1]University of Zanjan, Zanjan, Iran, [2]Institute for Advanced Studies in Basic Science, Zanjan, Iran.

[33] Enzymatic Powered Hollow Mesoporous Silica Janus Nano-motors

Xing Ma[‡], Anita Jannasch[†], Urban-Raphael Albrecht[†], Kersten Hahn[#], Albert Miguel López[‡], Erik Schäffer[†] and Samuel Sanchez[*,‡,§,∥]

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[34] Collective Dynamics of Active Particles in Complex Environments

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[35] Binary collision between chemically active self-propelled particles

Z. Eskandari[1], M. N. Popescu[1], M. Tasinkevych[1], and S. Dietrich[1,2]

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[36] Self-Propelling Silica-Based "Matchstick" Colloids with Tuneable Aspect Ratio

Brooke W. Longbottom[†], Richard Beanland[‡] and Stefan A. F. Bon[†]

[†]Department of Chemistry, University of Warwick, Coventry, CV4 7AL, United Kingdom, [‡]Department of Physics, University of Warwick, Coventry, CV4 7AL, United Kingdom

[37] Active colloids as a model for adatom surface-diffusion

Ji Tae Kim [a], Udit Choudhury [a], Hyeon-Ho Jeong [a], and Peer Fischer [a,b,*]

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[38] Guiding catalytically active particles with chemically patterned surfaces

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[39] How does a flexible chain of active particles swell?

S. Babel[1], A. Kaiser[1], B. ten Hagen[1], C. von Ferber[1,2] and H. Löwen[1]

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[40] Modelling cytoskeletal motility assays

C. Abaurrea Velasco[1], M. Abkenar[2], K. Marx, T. Auth[1], and G. Gompper[1]

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[41] Enhanced active motion of Janus colloids at the water surface

X. Wang, M. In, C. Blanc,M. Nobili and A. Stocco

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[42] Non-standard hydrodynamic screening of DNA thermophoresis

Aboubakry Ly[1] and Alois Würger[1]

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[43] Enhanced Diffusion of Active Enzymes

M. Alarcón-Correa[1, 2], A. Holst-Jahn[1, 2], Nadine Russeger[1], P. Oswald and P. Fischer[1,2]

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[44] Living on the edge: transfer and traffic of E. coli in a confined flow

N. Figueroa-Morales[1,2], G. L. Mino[3], A. Rivera[2], R. Caballero[2], E. Clément[1], E. Altshuler[2],and A. Lindner[1]

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[45] Design and construction of thermophoretic micro- and nanoswimmers

K. Günther[1], A. Herms[1], A. Bregulla[2], F. Cichos[2] and M. Mertig[1,3]

[1]Physikalische Chemie, Mess- und Sensortechnik, Technische Universität Dresden, Germany, [2]Molecular Nano-Photonics, Institute of Experimental Physics I, Universität Leipzig, Germany, [3]Kurt-Schwabe-Institut für Mess- und Sensortechnik e.V. Meinsberg, Germany

[46] Bead-spring microswimmers in a MPCD fluid

H.Ender[1], J. Kierfeld[1]

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[47] Anisotropic Thermophoresis of Colloidal Rods

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[48] Mesoscopic Simulation of Thermophoretic Microswimmers

M. Wagner[1] and M.Ripoll[1]

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[49] Adaptation of Lyman Break Galaxy Detection Method to PH-Gradient

Julian Weber,[1] Christopher Wittenberg,[1] Ran Niu, [1] Denis Botin[1] and Thomas Palberg[1]

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[50] Ciliated Microswimmers

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[51] Self-propulsion of Janus Particles near Thermoresponsive Polymer Brushes

M. Heidari[1], R. von Klitzing[1]

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[52] Swimming and swarming of E. coli bacteria

J. Hu[1], T. Eisenstecken[2], G. Gompper[1,2], R.G. Winkler[2]

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[53] Behavior of von Willebrand Factor in Flow: Margination & Adhesion

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[54] The role of heterogeneity in cancer cell migration

C. Mark[1], C. Metzner[1], J. Steinwachs[1], L. Lautscham[1], B. Fabry[1]

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[55] Living liquid crystals: single and collective bacterial motion in nematic media

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