Yan GRASSELLI

Associate Professor

Academy: Digitalization

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Research interests

Soft Condensed Matter including Rheological and Nano Rheological behaviors of fluids, Granular Materials, Electrical and Magnetic field induced properties of smart fluids.

Teaching interests

Applied Mechanics: Deformable Solids, Applied Mechanics: Dynamics, Business and Economics Calculus, Mathematics for Business and Management, Physics I, Physics II

Education

1993	Doctorate in Soft Condensed Matter, Université Côte d'Azur, France

Experience

Full-time academic positions

Since 2000	Associate professor, SKEMA Business School, France

Other academic affiliations and appointments

Since 2017	SKEMA BBA Director, SKEMA Business School, France
2014 - 2017	Deputy Director of the Bachelor Programme, SKEMA Business School, France
2009 - 2014	Academic Head Bachelors programmes, SKEMA Business School, France
2005 - 2009	Head of the mathematics & computer science dept. - Bachelors programmes, SKEMA Business School, France
1996 - 1999	Researcher at ICA1 - Post Doc, Universität Stuttgart, Germany

Other professional experiences

1999 - 2000	Network engineer, IBM, France

Research grants, Awards and Honors

Awards and Honors

2009	Award pedagogical innovation, SKEMA Business School, France

Publications

Peer-reviewed journal articles

BOSSIS, G., VOLKOVA, O. and GRASSELLI, Y. (2024). Discontinuous Shear Thickening of Suspensions of Magnetic Particles in Relation to the Polymer Coating on Their Surfaces. *Colloids and Interfaces*, 8(3), pp. 33.

BOSSIS, G., CIFFREO, A., GRASSELLI, Y. and VOLKOVA, O. (2023). Analysis of the rheology of magnetic bidisperse suspensions in the regime of discontinuous shear thickening. *Rheologica Acta*, 62(4), pp. 205-223.

BOSSIS, G., GRASSELLI, Y. and VOLKOVA, O. (2022). Capillary flow of a suspension in the presence of discontinuous shear thickening. *Rheologica Acta*, 61, pp. 1-12.

BOSSIS, G., GRASSELLI, Y. and VOLKOVA, O. (2022). Discontinuous shear thickening (DST) transition with spherical iron particles coated by adsorbed brush polymer. *Physics of Fluids*, 34(11).

GRASSELLI, Y., BOSSIS, G., VOLKOVA, O. and CIFFREO, A. (2021). Tunable discontinuous shear thickening with MR suspensions. *Journal of intelligent Material Systems and Structures*, 32(12), pp. 1349-1357.

BOSSIS, G., VOLKOVA, O., GRASSELLI, Y., GUEYE, O. and CIFFREO, A. (2019). Discontinuous shear thickening in concentrated suspensions. *Philosophical Transactions A*, 337(2143).

BOSSIS, G., VOLKOVA, O., GRASSELLI, Y. and CIFFREO, A. (2019). The Role of Volume Fraction and Additives on the Rheology of Suspensions of Micron Sized Iron Particles. *Frontiers in Materials*, 6(4).

BOSSIS, G., GRASSELLI, Y., MEUNIER, A. and VOLKOVA, O. (2018). Tunable discontinuous shear thickening with magnetorheological suspensions. *Journal of intelligent Material Systems and Structures*, 29(1), pp. 5-11.

GRASSELLI, Y., BOSSIS, G., MEUNIER, A., VOLKOVA, O., MORINI, R. and ZUBAREV, A. (2017). Discontinuous shear thickening in the presence of polymers adsorbed on the surface of calcium carbonate particles. *Rheologica Acta*, 56, pp. 415-430.

BOSSIS, G., GRASSELLI, Y., MEUNIER, A. and VOLKOVA, O. (2016). Outstanding magnetorheological effect based on discontinuous shear thickening in the presence of a superplastifier molecule. *Applied Physics Letters*, 109, pp. 4.

GRASSELLI, Y., BOSSIS, G. and MORINI, R. (2015). Translational and rotational temperatures of a 2D vibrated granular gas in microgravity. *European physical journal*, 38, pp. 8.

GRASSELLI, Y., BOSSIS, G. and GOUTALLIER, G. (2009). Velocity-dependent restitution coefficient and granular cooling in microgravity. *Europhysics Letters*, 86(6).

BOSSIS, G., GRASSELLI, Y. and VOLKOVA, O. (2004). Granular rheology in zero-gravity. *Journal of Physics: Condensed Matter*, 16(18), pp. 3279-3287.

GRASSELLI, Y. and HERRMANN, H. (2001). Crater formation on a three dimensional granular heap. *Granular Matter*, 3, pp. 201-204.

GRASSELLI, Y., HERRMANN, H., ORON, G. and ZAPPERI, S. (1999). Shapes of heaps and in silos. *The European Physical Journal B - Condensed Matter and Complex Systems volume*, 10, pp. 673-679.

GRASSELLI, Y. and HERRMANN, H. (1998). Etude expérimentale sur la forme d'un tas de billes dans un silo bidimensionnel. *Granular Matter*, 326(1), pp. 61-67.

GRASSELLI, Y. and HERRMANN, H. (1998). Experimental study of granular stratification. *European Journal of Physics B*, 1, pp. 43-47.

GRASSELLI, Y. and LOBRY, L. (1997). Hydrodynamic interactions between a particle and two rigid walls : effects of surface roughness and many body hydrodynamic interactions. *Physics of Fluids*, 9(12), pp. 3929-3931.

GRASSELLI, Y. and HERRMANN, H. (1997). On the angles of dry granular heaps. *Physica A (Statistical Mechanics and its Applications)*, 246(3-4), pp. 301-312.

GRASSELLI, Y. and BOSSIS, G. (1995). Three-Dimensional Particle Tracking for the Characterization of Micrometer-Size Colloidal Particles. *Journal of Colloid and Interface Science*, 170(1), pp. 269-274.

BOSSIS, G., GRASSELLI, Y., LEMAIRE, E., PERSELLO, J. and PETIT, L. (1994). Phase separation and flow induced anisotropy in electrorheological fluids. *Europhysics Letters*, 25(5).

GRASSELLI, Y., BOSSIS, G. and LEMAIRE, E. (1994). Structure induced in suspensions by a magnetic field. *Journal de Physique II*, 4(2), pp. 253-263.

BOSSIS, G., CLERCX, H.G., GRASSELLI, Y. and LEMAIRE, E. (1994). Theoretical analysis of field induced structure in E.R. and M.R. fluids. *International Journal of Modern Physics B*, 8(20n21), pp. 2747-2763.

GRASSELLI, Y., BOSSIS, G. and LEMAIRE, E. (1993). Field induced structure in magnetorheological suspensions. *Progress in Colloid and Polymer Science*, 93, pp. 175-177.

BOSSIS, G., GRASSELLI, Y., LEMAIRE, E., MEUNIER, A., BRADY, J.F. and PHUNG, T. (1993). Rheology and microstructure in colloidal suspensions. *Physica Scripta*, T49A, pp. 37-47.

LEMAIRE, E., BOSSIS, G. and GRASSELLI, Y. (1993). Yield stress and structuration of magnetorheological suspensions. *Journal of Magnetism and Magnetic Materials*, 122(1-3), pp. 51-52.

LEMAIRE, E., GRASSELLI, Y. and BOSSIS, G. (1992). Field induced structure in magneto and electro rheological fluids. *Journal de Physique II*, 2(3), pp. 359-369.

Book chapters

BINET, F., COSTE-MANIÈRE, I., DESCOMBES, C., GRASSELLI, Y. and OUEDERMI, D. (2019). Fast fashion and sustainable consumption. In: Subramanian Senthilkannan Muthu (ed.). *Fast Fashion, Fashion Brands and Sustainable Consumption. Textile Science and Clothing Technology*. 1st ed. Singapore: Springer, pp. 19-35.

AMOS, C.F., COSTE-MANIÈRE, I., GRASSELLI, Y. and BOYER, G. (2017). The Virtuous Circle: Hard Sustainable Science Versus Soft Unsustainable Science Within Marketing Functions of Fashion and Luxury Sectors and How to Prevent 'Soylent Green' from Happening. In: Subramanian Senthilkannan Muthu (ed.). *Textile Science and Clothing Technology : Implications in Textiles and Fashion*. 1st ed. Singapore: Springer, pp. 75-87.

GRASSELLI, Y., BOSSIS, G., MEUNIER, A. and VOLKOVA, O. (2017). Dynamics of a 2D vibrated model granular gas in microgravity. In: Michael Sakellariou (ed.). *Granular Matter*. 1st ed. Springer.

GRASSELLI, Y. and BOSSIS, G. (1998). Three dimensional optical particle tracking in colloidal suspensions. In: A. Milling (ed.). *Surface Characterization methods : Principles, Techniques and Applications*. 1st ed. Bosa Roca: Taylor & Francis.

Conference proceedings

BOSSIS, G., GRASSELLI, Y., MEUNIER, A. and VOLKOVA, O. (2016). Tunable discontinuous shear thickening with MR suspensions.

Conference presentations

GRASSELLI, Y., CIFFREO, A. and BOSSIS, G. (2020). Transition de blocage des écoulements de suspensions magnétiques en différentes géométries. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Online (ZOOM).

GRASSELLI, Y., BOSSIS, G. and VOLKOVA, O. (2019). Discontinuous shear thickening in suspensions of ferromagnetic particles. In: International Conference on Magnetic Fuilds. Paris.

GRASSELLI, Y., BOSSIS, G. and VOLKOVA, O. (2019). Discontinuous Shear Thickening in concentrated suspensions: effect of gravity. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). La Rochelle.

VOLKOVA, O., GRASSELLI, Y. and BOSSIS, G. (2019). Analysis of discontinuous shear thickening controlled by a magnetic field under different flow geometries. In: International Conference on Electrorheological Fluids and Magnetorheological Suspensions. Wollongong.

GRASSELLI, Y., BOSSIS, G. and VOLKOVA, O. (2018). Discontinuous shear thickening and stick-slip oscillations tuned by a magnetic field. In: European Rheology Conference. Naples.

BOSSIS, G., GRASSELLI, Y. and CIFFREO, A. (2018). Percolation d'agrégats de particules et blocage d'écoulement de suspensions très concentrées. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Marseille.

BOSSIS, G., GRASSELLI, Y. and MEUNIER, A. (2017). Tunable discontinuous shear thickening in a magnetorheological suspension. In: European Rheology Conference. Copenhagen.

BOSSIS, G., GRASSELLI, Y. and MEUNIER, A. (2017). Discontinuous shear thickening in the presence of superplasticizer molecules. In: European Rheology Conference. Copenhagen.

GRASSELLI, Y., BOSSIS, G. and VOLKOVA, O. (2017). Discontinuous shear thickening and slip-stick oscillations. In: GFR (Groupe Français de Rhéologie). Nice.

GRASSELLI, Y., BOSSIS, G. and VOLKOVA, O. (2017). Contrôle des phénomènes de blocage d'écoulement de suspensions très concentrées de microparticules en présence de fluidifiants. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Fréjus.

BOSSIS, G., GRASSELLI, Y. and MEUNIER, A. (2016). Tunable discontinuous shear thickening with MR suspensions. In: International Conference on Electrorheological Fluids and Magnetorheological Suspensions. Incheon.

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BOSSIS, G., GRASSELLI, Y. and MEUNIER, A. (2016). Transition de blocage en présence de superplastifiant dans les suspensions très concentrées. In: GDR CNRS MEPHY (Mécanique et Physique des Sytèmes Complexes). Marseille.

BOSSIS, G., GRASSELLI, Y. and MEUNIER, A. (2016). Discontinuous Shear Thickening controlled by a magnetic field. In: GFR (Groupe Français de Rhéologie). Lille.

GRASSELLI, Y., BOSSIS, G. and MORINI, R. (2015). Translational and rotational temperatures of a 2D vibrated granular gas in microgravity. In: Int. Conference " Granular Matter in Low Gravity ". Erlangen.

GRASSELLI, Y., BOSSIS, G. and MORINI, R. (2015). Abrupt shear thickening and stick-slip behavior of concentrated suspensions in the presence of fluidizer molecules. In: European Rheology Conference. Nantes.

BOSSIS, G., GRASSELLI, Y. and MEUNIER, A. (2014). Phénomènes de blocage et de stick-slip dans des suspensions très concentrées de microparticules en présence de fluidifiants. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Carry le Rouet.

GRASSELLI, Y., BOSSIS, G. and MORINI, R. (2011). Equilibrium Temperature of a vibrated model granular medium. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Fréjus.

GRASSELLI, Y., BOSSIS, G. and VOLKOVA, O. (2011). Nanoscale Rheology of Viscoplastic Media. In: BIT International Conference on Nanotechnologies & Nanosciences. Dalian.

GRASSELLI, Y., BOSSIS, G. and MORINI, R. (2010). Equilibrium Temperature of a vibrated model granular medium in microgravity. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Fréjus.

GRASSELLI, Y., BOSSIS, G. and MORINI, R. (2009). Intelastic properties of granular particles. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Balaruc.

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GRASSELLI, Y., BOSSIS, G. and AUDOLY, A. (2007). Rotationnal effects of model granular particles. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Aussois.

GRASSELLI, Y., BOSSIS, G. and AUDOLY, A. (2006). Shear and flow of a granular gas in microgravity. In: GDR CNRS - MFA (Micropesanteur Fondamentale et Appliquée). Fréjus.

GRASSELLI, Y., BOSSIS, G. and AUDOLY, A. (2005). Sheared and vibrated granular gas. In: Proc. Int. Conf. TGF 05. Berlin.

GRASSELLI, Y., BOSSIS, G. and LEMAIRE, E. (2000). Yield stress and field induced structure in electro and magnetorheological suspensions. In: Electrorheological fluids.

GRASSELLI, Y. and HERRMANN, H. (1997). Shape of a granular heap in a two dimensional silo. In: GDR CNRS Dry granular materials. Paris.

GRASSELLI, Y., PETIT, L. and GONDRET, P. (1995). Mesures de coefficient de diffusion de particules colloïdales par suivi optique dynamique. In: Visualisation et traitement d'images en mécanique des fluides. St Etienne.

GRASSELLI, Y. and FERMIGIER, M. (1995). Fluctuations thermiques de chaînes de particules polarisées. In: Journées Physique Statisque. Paris.

GRASSELLI, Y., LEMAIRE, E. and BOSSIS, G. (1993). Dynamics of structure deformation and the rheology of electrorheological fluids. In: Meeting of the Soc. of Rheology. Boston.

GRASSELLI, Y., BOSSIS, G. and CLERCX, H.G. (1993). Analysis of field induced structures in electro and magnetorheological fluids. In: IVe Int. Conf. on E.R. Fluids. Bregenz. Bregenz.

GRASSELLI, Y., BOSSIS, G. and LEMAIRE, Y. (1992). Field induced structure in colloidal suspensions. In: E.C.I.S. Conf. - Graz (A). Graz.

GRASSELLI, Y., LEMAIRE, E. and PAPARODITIS, C. (1992). Yield stress and structuration of magnetorheological suspensions. In: VIe Int. Conf. on Magnetics Fluids. Paris (F). Paris.

GRASSELLI, Y., LEMAIRE, E. and BOSSIS, G. (1991). Induced structure in colloidal suspensions submitted to an electric or a magnetic field. In: European Colloid and interface conference. Mainz (D). Mainz.