**2018-2019 IFPRI Projects, Reviews, Workshops, Roundtables and Proposed Project Briefs**

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| **Type** | **Research Area** | **Project Title** | **Research Associate** | **Institution** |
| **Full Project** | Characterization | [Die Filling of Aerated Powders](http://www.ifpri.net/Academics/Reports/1314AnnReports/ARR-2014-05-wu.pdf)  |  C. Wu |  U. Surrey |
| Size Reduction |  |  |  |
| Formation | Self-Assembled Monolayers as Nucleating Surfaces to Study Early Formation Pathways of Crystallographic Polymorphs |  U. Wiesner |  Cornell U. |
| Crystal Shape Prediction |  M. Doherty |  UCSB |
| Creating Tuneable Agglomerates via 3D Printing |  K. Hapgood |  Deakin U. |
| Characterization of Spray Nozzles at Industrial Conditions | N. Ashgriv | U. Toronto |
| Atomization at High Temperature | A. Bayly | U. Leeds |
| Dry Systems | Prediction of Segregation |  J. McCarthy |  U. Pittsburgh |
| Flowability Assessment of Weakly Consolidated Powders |  C. Hare |  U. Surrey |
| Controlling Rheology via Boundary Conditions in Dense Granular Flows |  K. Daniels |  NC State U.  |
| Scaling Rules for Powder Mixing  |  I. Govender |  U. KwaZulu-Natal |
| Powder Adhesion to Metal Surfaces During Compaction | C. Sinka | U. Leicester |
| Wet Systems | On the Long-Term Stability of Colloidal Gels | W. Poon | U. Edinburgh |
| Cake Filtration | U. Peuker | TU Bergakademie Freiberg |
| A Multi-Scale Study of Powder Reconstitution Phenomena | C. Gaiani | U. Lorraine |
| Slurry and Paste Rheology | E. Koos | KU Leuven |
| Systems Engineering | Model-Based Control of Crystallization |  Z. Nagy |  Purdue U. |
| **Collaboration** | Dry Systems | Control of Fluidity via Boundary Conditions, Vibrations and Stress Fluctuations | N. Vriend | U. Cambridge |
| **Reviews** | Formation | Fine Particle Coating |  Andreas Bück |  Friedrich-Alexander U. Erlangen-Nuremberg |
|  Dry Systems | Confronting the Dry System “Grand Challenge”: Relating Particle Properties, Microstructure and Bulk Flow | V. Magnanimo | U. Twente |
| Characterization | Measurement and Quantification of Fines in the Presence of Larger Particles – Remapping the Analysis Space of an Industrially Relevant Issue | K. Jensen | National Research Centre for the Working Environment |
| Wet Systems | Critical Review of Tribology, Friction and Contact Mechanics in Wet Systems | TBD | TBD |
| Systems Engineering | Systems Engineering Gap Analysis | P. Mort | PrM3 LLC |
| **Round-table** | Dry Systems | Round Robin Exercise on Calibration of DEM Simulations |  J. Seville |  U. Birmingham |
| **Workshop** | Formations | Granulation Systems Workshop |  In Conjunction with POWTECH 2019 April 9-11 |
| **Project Briefs for 2018 Programs (Proposed Programs)** | Wet Systems | Bridging the Gap Between Model and Industrial Colloidal Formulations |  L. Hsiao | North Carolina State U. |
|  G. Petekidis | IESL-FORTH |
|  J. Vermant | ETH Zurich |
| Systems Engineering  | A Systems Engineering Approach to Dry Milling with Grinding Aid Additives | A. Kwade | TU Braunschweig |
| Systems Engineering  | Precision Powder Feeding: Theoretical Understanding and Predictive Model to Link Materials Properties to Performance of Twin Screw Feeders | P. Nott | Indian Institute of Technology |
| C. Wassgren | Purdue U. |
| Formation | Model Assisted Design of Granular Products | R. Smith | U. Sheffield |
| R. Ramachandran | Rutgers U. |
| Powder Flow | Mechanism of Formation and Growth of Powder Layers on Process Equipment Surfaces at Low Stresses | C. Ghoroi | ITT Gandhinagar |
| M. Poletto | U. Salerno |
| Grinding | Experimental Material Transformation from Milling |  J. Heng | Imperial College |
| M. Descamp | U. Lille |