

Rheology Division

Fall 2016 Newsletter

2016-2017 Rheology Division Leadership

Chair: Wu Ge

Vice-Chair: Khamis Moses

Secretary and Treasurer: **open**

Outgoing Co-Chairs: Robin K. Connelly and Kingsly Ambrose

Awards Committee: Jon M. Faubion

Technical Program Committee: **open**

Long Range Planning Committee: Robin K. Connelly

From the Outgoing Co-Chairs:

It has been great two years with the current leadership team, led by Robin, and the members of the Rheology Division coming together to energize the division with renewed activities. Last year, we had four promising young professionals present their work for the Isydore Hlynka Best Student Paper Award. The list of finalists for this year award is given in the next page. Your encouragement by attending these award presentations will be greatly appreciated. This year, in collaboration with Milling & Baking Division, we are organizing a symposium on '**Powder Rheology**' at the Annual Meeting. The objective of the session would be to define the fundamentals on particulate material characterization and processing. We have lined-up experts from different fields of powder rheology with a hope that these presentations will provide an additional dimension to traditional 'Rheology'. Please try to attend this symposium and update your knowledge in powder rheology.

The leadership team strongly believes that the Rheology division provides great opportunities for *networking*. The division meeting and luncheon will be a great place to meet the pioneers and scientists who provided us with opportunities to learn Rheology, interact with representatives from instrument manufacturers, and connect with young professionals.

The leadership team urges each of you to get more involved with the Rheology Division. We currently are recruiting a *Secretary-Treasurer and Technical Program Committee chair* to the leadership team. In addition, you can make nominations for the Rheology Division awards, assist with judging in the student paper award, and participate in the development of a Rheology of Cereals short course that is currently being planned for early 2018. Finally, if you know an AACCI member who has an interest in rheology but is not a member of the Rheology Division, please invite them to our luncheon and ask them to consider joining the Rheology Division. Tickets to the luncheon will be available at registration.

Kingsly Ambrose and Robin K. Connelly, outgoing 2016 Co-Chairs

2016 Meeting Highlights

October 23-26, 2016

Savannah, Georgia, U.S.A

<p>Rheology Leadership Team Planning Meeting</p> <p>Monday, October 24</p> <p>5:30 – 6:30 PM</p>	<p>Rheology Division Meeting and Lunch</p> <p>Wednesday, October 26</p> <p>12:00 – 1:30 PM</p>	<p>Luncheon Keynote</p> <p>Dr. Bruce Hamaker</p> <p>Wednesday, October 26</p> <p>12:00 – 1:30 PM</p>
<p>Gwinnett Board Room CC</p>	<p>Room: 103 CC</p>	<p>Room: 103 CC</p>

* If you are interested in joining the leadership team: Please plan to attend the leadership team planning meeting and/or the division meeting and lunch.

** If you haven't registered to attend the division meeting and lunch, tickets will be available at the registration desk.

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Isydore Hlynka Best Student Paper Award Finalists

1. Fang Fang, Purdue University. Effect of hydrocolloids on shear-thickening behavior of starch dispersions and its impacts on gastric emptying rate.
2. Mariana Perez Herrera, University of Alberta. Rheological properties of gums and starch nanoparticle blends as influenced by source, concentration and temperature.
3. Xinyang Sun, University of Manitoba. Effects of wheat cultivar, water, NaCl and mixing on the rheological properties of bread dough.

Texture Technologies Quality Research Award

The Texture Technologies Quality Research Award is awarded annually to two authors who write and present high quality research which broadly involves instrumental texture analysis. The objective of the award is to increase awareness among professors and students of the importance of publishing impactful research in sufficient, high-quality detail that allows fellow researchers to replicate and build upon the work. The 2015 Best Paper Award selected from 2015 issues of *Cereal Chemistry* and *Cereal Foods World* is being presented at the Opening General Session to a diverse team of authors from South Dakota State University: Dr. Julie Kindelspire, Cereal Chemist (currently with Post Cereal); Dr. Melanie Caffé Trembl, Oat Breeder; Dr. Karl Glover, Spring Wheat Breeder, and Dr. Padmanaban (Padu) Krishnan, Cereal Chemist. The paper "Dough Strain Hardening Properties as Indicators of Baking Performance" [*Cereal Chemistry* May/June 2015, Volume 92, Number 3, Pages 293-301] discusses the importance of bread loaf volume as an economic criterion. The authors describe the relationship between the strain hardening index and baking performance. The study identified the extensibility parameters that contribute to the strain hardening index. Congratulations, to the team from South Dakota State University!

The 5 finalists for the 2016 Best Presentation Award are indicated on the list of rheology related posters and presentations on the next page. The oral and poster presentations will be judged during the annual meeting and the award announced at the Closing General Session.

LUNCHEON KEYNOTE!

HOW CAN A FOOD CHEMIST USE RHEOLOGY?

Prof. Bruce Hamaker
Professor of Food Science
Purdue University

2016 AACCI Annual Meeting Rheology Related Presentations

Oral Presentations*

Session	Title and Authors	Date & Time
Impact of Rheology on Product Quality , 105-106, CC	All presentations [301-O to 308-O]	Monday, October 24, 8:30-10:15 AM
Impact of Rheology on Product Quality , 105-106, CC	302-O[°] Rheological properties of gums and starch nanoparticle blends as influenced by source, concentration and temperature M. PEREZ HERRERA, T. Vasanthan	Monday, October 24, 8:45 AM
Practical Applications for Classic Dough Systems , 200-201, CC	704-O[°] Effects of wheat cultivar, water, NaCl and mixing on the rheological properties of bread dough X. SUN, F. Koksel, M. Scanlon, M. Nickerson	Tuesday, October 25, 11:15 AM
Functionality of Novel Grains, Pulse and Components, 200-201, CC	806-O Effects of hydrocolloids on rheological and optical properties of proso millet dough	Tuesday, October 25, 3:45 PM
Powder Rheology⁺ , 203-205, CC	All presentations [1401-S to 1405-S]	Wednesday, October 26, 10:30-11:45 AM
Quality and Food Safety for the Grain Industry , 203-205, CC	1104-O [*] Time-dependent adhesion behaviour of dough - relation to surface structure, surface energy and microbial contamination R. LAUKEMPER, M. Jekle, T. Becker	Wednesday, October 26, 2:15 PM

⁺ Symposia Sponsored by the Rheology Division

^{*} Finalist for Texture Technologies Quality Research Presentation Award

[°] Isydore Hlynka Best Student Paper Award finalist

* List is representative. Please consult the 2016 Annual Meeting Program Book for complete list of posters and presentations.

Posters*

No.	Title and Authors
105-P	Physical, rheological and baking properties of proso millet cultivars M. SINGH, A. Adedeji
515-P [*]	Comparison of creep recovery test from gluten and dough: Effects of HMW-GS composition Z. HERNÁNDEZ ESTRADA, P. Rayas-Duarte, J. Figueroa Cárdenas
520-P	Effect of damaged starch and NaCl content on dough properties of a Canadian Western Red Spring wheat A. STONE, C. Briggs, P. Hucl, M. Nickerson
524-P	Sensory and Instrumental Measurement of Crispness in the Crumb Texture of Toasted Pan Breads. H. OKUSU
901-P to 908-P	Section: The Physics of Dough , All posters
908-P [*]	Rapid extensigraph protocol for measuring dough viscoelasticity and mixing requirement B. DUPUIS, K. Wang, R. Cuthbert, B. Fu
1010-P[°]	Effects of Hydrocolloids on Shear-thickening Behavior of Starch Dispersions and Its Impacts on Gastric Emptying Rate F. FANG, O. Campanella, B. Hamaker
1101-P [*]	Application of instrument-based texture measurement to rice quality evaluation C. DOMINGO
1111-P	Rheological characterization of new cereal: Tritordeum A. DUBAT, L. Bosc-Bierne, O. Le Brun

Poster viewing: Monday October 24, 11:30 AM – 6:00 PM (5:00-6:00 PM Odd # authors present)

Tuesday

October 25, 8:00 AM – 2:15 PM (1:00-2:00 PM Even # authors present)

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From the Technical Program Committee

Rheology Short Course revival – Request for information

This is an exciting time for the Rheology Division as we get into the process of reviving the Rheology Short Course. The course has had a rich history with strong involvement from academic and industry participants, and we hope to recreate this Division offering by drawing on experiences of the past and the needs of the future.

The current time frame for the Short Course is to conduct it in early 2018. We are looking for instructors from academia and industry to get involved.

To give your inputs and to get involved, please attend the **leadership team planning meeting and/or the division meeting and lunch**. For those who cannot make it to the meeting, please contact us as per the information below. We look forward to hearing from you.

Kingsly Ambrose, Outgoing Co-Chair: rambrose@purdue.edu

From the Awards Committee

Rheology Division sponsors and underwrites three different awards. All of them need your support and active participation if they are to be successful. Our goal is to present all three awards next year (The AACCI Centennial) at the meeting in Minneapolis. That is an ambitious goal but I believe we can and will achieve it with your help. Our awards are:

- **The George W. Scott Blair Lecture Award:** This award recognizes a scientist who has shown exceptional ability in research areas involving rheology and texture as related to cereal based materials or products. It is normally presented in even years. The last award was made in 2012.
- **The Arie H. Bloksma Young Scientist Award:** This award recognizes scientists who have completed their academic training within the last five (5) years and who have demonstrated outstanding ability in cereal-based rheology and texture related research. This award is presented in odd years.
- **The Isydore Hlynka Best Student Paper Award:** The division selects the best rheology paper presented by a student at the yearly AACCI meeting and presents the award the following year at the Rheology Division Luncheon.

How can you contribute to the success of our Division's award process?

- The committee needs nominations for the Scott Blair and Bloksma awards. We rely on you, the division members to bring the committee the best candidates.
- The committee ALSO needs your active participation in the Best Student Paper Award process, volunteer to help the committee screen presentations and participate in the Division Lunch at the annual meeting.

If you have any questions, need more information or, better yet, want to prepare a nomination, contact the Rheology Division in-coming chair (wu.ge@mdlz.com) or the Awards Committee Chair (jfaubion@ksu.edu). Thanks in advance for helping our division make a positive contribution to the AACCI.

Jon Faubion, Awards Committee Chair

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2015-2016 Rheology Division Treasurer Report



Rheology Division

AACC		RHEOLOGY DIVISION		RHEOLOGY DIVISION	
		MARCH 2016		JUNE 2016	
G/L 21426					
BALANCE FORWARD	3/31/15		\$ 11,123.82		\$ 10,077.22
RECEIPTS					
<i>April Dues</i>		105.00		90.00	
<i>May Dues</i>		-		90.00	
<i>June Dues</i>		30.00		75.00	
<i>July Dues</i>		15.00			
<i>August Dues</i>		75.00			
<i>September Dues</i>		30.00			
<i>October Dues</i>		75.00			
<i>November Dues</i>		45.00			
<i>Annual Meeting Income</i>		340.00			
<i>December Dues</i>		30.00			
<i>January Dues</i>		60.00			
<i>February Dues</i>		75.00			
<i>March Dues</i>		45.00			
	TOTAL INCOME		925.00		255.00
EXPENSES					
<i>April Dues Processing Fees</i>		7.00		6.00	
<i>May Dues Processing Fees</i>		-		6.00	
<i>June Dues Processing Fees</i>		2.00		5.00	
<i>July Dues Processing Fees</i>		1.00			
<i>August Dues Processing Fees</i>		5.00			
<i>September Dues Processing Fees</i>		2.00			
<i>October Dues Processing Fees</i>		5.00			
<i>Signs</i>		71.50			
<i>November Dues Processing Fees</i>		3.00			
<i>Best Student Paper Award</i>		300.00			
<i>Best Student Paper Award</i>		300.00			
<i>Annual Meeting Expenses</i>		508.50			
<i>Ashford TRS Nickel</i>		130.27			
<i>December Dues Processing Fees</i>		2.00			
<i>January Dues Processing Fees</i>		4.00			
<i>Expense Reimbursement Ambrose Kingsly</i>		622.33			
<i>February Dues Processing Fees</i>		5.00			
<i>March Dues Processing Fees</i>		3.00			
	TOTAL EXPENSES		(1,971.60)		(17.00)
BALANCE MARCH 2016			\$ 10,077.22		\$ 10,315.22

Robin Connelly - Co-Chair

Rose Prabin Kingsly Ambrose - Co-Chair

Moses Khamis - Secretary-Treasurer

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Khamis Moses, Secretary-Treasurer

INTERESTED IN LEADERSHIP ROLE?

Attend division lunch meeting and volunteer or

email your interest to wu.ge@mdlz.com.

How Rheology Division is Helping You Network:

Attend division lunch meeting and comment

Or email your views to robin.k.connelly@dupont.com & rambrose@purdue.edu