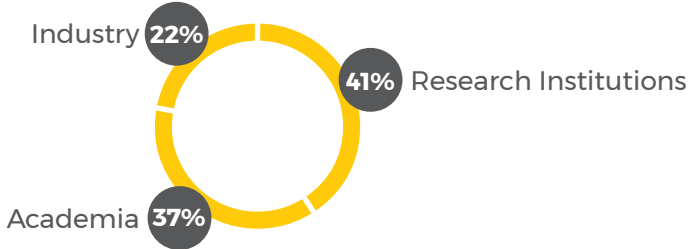


2018 Reynolds Cup Competition Results

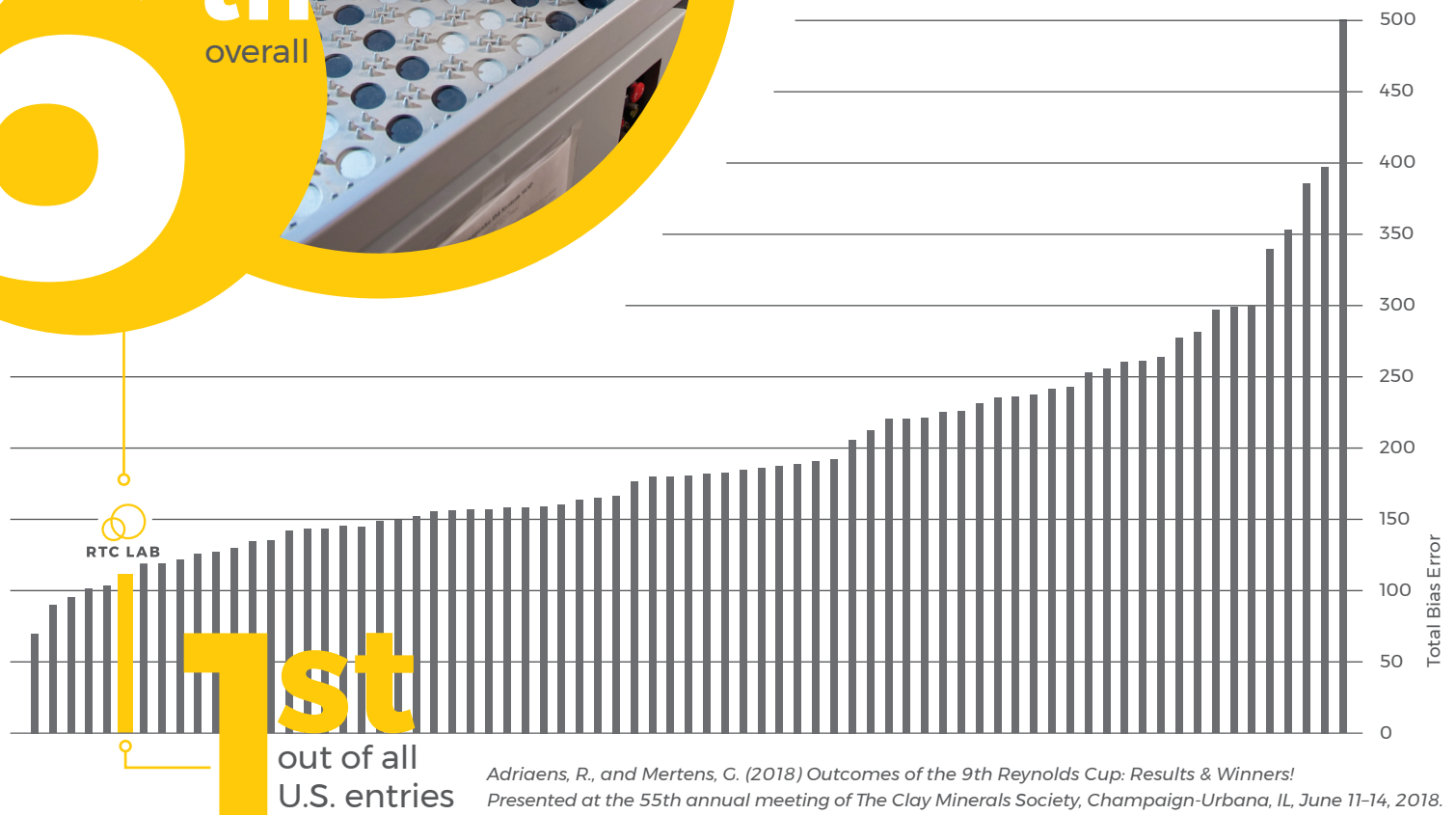


Contestants were 41% research institutions, 37% academia and 22% industry



An international field of 88 registrants from 28 countries

United States	20	Republic of Korea	1
Germany	11	Brazil	1
France	6	Canada	1
Australia	5	Denmark	1
United Kingdom	5	Chile	1
Poland	5	Colombia	1
Russia	5	Israel	1
Spain	4	Slovakia	1
China	3	Venezuela	1
Norway	3	Greece	1
India	2	Slovenia	1
Belgium	2	Hungary	1
Turkey	2	Italy	1
Switzerland	1	"Europe"	1



Adriaens, R., and Mertens, G. (2018) Outcomes of the 9th Reynolds Cup: Results & Winners! Presented at the 55th annual meeting of The Clay Minerals Society, Champaign-Urbana, IL, June 11-14, 2018.

What is the Reynolds Cup Competition?

- The Reynolds Cup competition is a biennial event maintained by The Clay Minerals Society, named after Robert Reynolds for his pioneering work in quantitative clay mineralogy and his contributions to clay science.
- The Reynolds Cup competition utilizes mixtures of pure standards that represent realistic sedimentary rock compositions. Any method or any combination of methods can be used to obtain the most accurate quantitative phase analysis.
- Three samples each are given to the various participants to determine who can analyze the samples and obtain abundances that most closely match the known abundances.

Conclusion from the Reynolds Cup

- RTC Lab is doing well using only our “standard” XRD analyses. We took sixth place out of 88 entries – first out of the U.S. entries.
- Quantitative Mineralogy is still not an “insert sample, press button” analysis. Methods used to collect data, to analyze data, and the skill/knowledge of the analyst are all still extremely important.
- Chesapeake uses proven in-house software to conduct the analyses.

Chipera, S.J., and Bish, D.L. (2002) FULLPAT: A full-pattern quantitative analysis program for X-ray powder diffraction using measured and calculated patterns. *J. Applied Crystallography*, 35, 744-749.

Chipera, S.J., and Bish, D.L., (2013) Fitting Full X-Ray Diffraction Patterns for Quantitative Analysis: A Method for Readily Quantifying Crystalline and Disordered Phases. *Advances in Materials Physics and Chemistry*, 3, 47-53, (Special Issue on X-Ray Diffraction). (<http://www.scirp.org/journal/ampc>).
- Chesapeake consistently does well in the Reynolds Cup competitions, placing third, fifth and ninth in past competitions.

XRD Analyses at RTC Lab:

Rapid turnaround
2 - 4 weeks

Experienced: over
50,000 analyses
conducted to date

For more information or to
schedule a tour please contact

info@RTCLab.chk.com

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