

METRUM

RESEARCH GROUP

Metrum Offering New Technology Services to Clients

Our team is working with clients to deliver end-to-end solutions that support quantitative decision making. Devin Pastoor, Ph.D., Senior Director of Engineering Services, specializes in bridging the unique characteristics of each client's IT structure with the needs of the scientific team. This unit broadens the services Metrum is able to offer to our clients, particularly on the infrastructure side.

Some examples include:

- Providing strategies (design, roll out, and support) to migrate from existing tools (SAS/Tableau) to more modern, open, cloud-based workflows;
- Developing decision-support dashboards to promote direct executive engagement;
- Building and testing prototype workflows and tools to explore potential solutions to business challenges.

We would be happy to discuss how these services can benefit you and your M&S team!

New Features Added to mrgsolve

We have a new formal code block called \$PRED that allows users to write models that don't utilize differential equations and where model predictions can be expressed in closed form. For example, users can use \$PRED to code an Emax model that utilizes daily AUC (either simulated in the model or in the input data) to drive the effect. While users have always been able to code models like these in mrgsolve, there is now a formal code block to do this. There are also new, relaxed input data set requirements when coding models with \$PRED.

Also new in the development version is a mechanism to allow users to schedule events or interventions from within the model itself, rather than requiring the events to be encoded in the input data set. For example, users might wish to create a discontinuity in the simulation where a modeled parameter changes value at a specific time that may not already be included in the data set. Users can now create events like these from within the model itself. The advantage with this approach is that the state of the model at any given time can be utilized to determine the characteristics of the event (for example, what time in the future should the parameter change value?).

Please read more about \$PRED and modeled interventions on the mrgsolve blog. We're excited to introduce these features for people to test and use on a provisional basis. Hopefully, this functionality will be ready for release into a version on CRAN in the near future.

Metrum Honored to be a 2018 Marcum Tech Top 40 Award Recipient!

This marks the eighth time Metrum Research Group has been chosen as a Marcum Tech Top 40 recipient.

Award received at ACCP Annual Meeting

Dr. Marc Gastonguay was awarded the Bristol-Myers Squibb Mentorship in Clinical Pharmacology award.

Metrum Scientists Presented at the Following Meetings:

- ACCP
- ISoP NE
- R/Medicine
- R/Pharma
- StanCon
- Stan for Pharmacometrics
- American Pediatrics Healthcare & Infectious Diseases Congress
- Midwest Biopharmaceutical Statistics Workshop

**see these presentations and more at metrumrg.com/publications*

New Courses Now Available on Our Website!

- Advanced Use of Stan, RStan and Torsten for Pharmacometric Applications
- Introduction to mrgsolve (PAGE Workshop, 2018)

Metrum Promotions

Congratulations to the following well-deserved promotions:

- Jonathan French, Sc.D., Fellow
- Curtis Johnston, Pharm.D., Senior Scientist II
- Dan Polhamus, Ph.D., Principal Scientist I
- Jayson Wilbur, Ph.D., Principal Scientist I
- Jia Kang, Ph.D., Senior Scientist I
- Kyle Baron, Pharm.D., Ph.D., Principal Scientist I
- Nathanael Dirks, Pharm.D., Ph.D., Principal Scientist I
- Jim Marsan, Senior Director of Resource and Project Management
- Danielle Dunn, Senior Accounting Manager
- Heidi Seaborg, Resourcing & Contracts Manager

Welcome to the Metrum team!

- Eric Burroughs, M.S. - Principal Scientist II
- Shona Kidd - Documentation & Process Manager
- Jill Wallace - Client Relationship Coordinator
- Devin Pastoor Ph.D. - Senior Director of Engineering Services
- Katherine Kay, Ph.D. - Research Scientist
- Jessica Krystle Roberts, Ph.D., MSCI - Research Associate I
- Michael Heathman, M.S. - Group Leader, Principal Scientist II

Metrum in the Community

Habitat for Humanity

Employees took part in a community service day in May, working with Habitat for Humanity in the Hartford area. Paint brushes and power tools were used to renovate a house, helping make the dream of homeownership a reality for families living in need. Eleven staff members were able to dedicate the day to volunteer to participate in A Brush with Kindness, a program assisting low-income families.



Walk MS 2018

Employees and families enjoyed participating in a local MS Walk in September.

Metrum Research Group was also proud to be a local sponsor for the event, helping to raise money and awareness for this disease and those it affects.

Find Metrum at ACoP9 in San Diego, CA!

Stop by our exhibit booth! # 8 & 9 We'd love to say hello to you!

Check out presentations and posters by MRG employees! Matthew Riggs, Ph.D., James Rogers, Ph.D., Kyle Baron, Ph.D., William Gillespie, Ph.D., Janelle Hajjar, M.S., and Ahmed Elmokadem, Ph.D.

Attend a Workshop:

- Bayesian analysis of categorical, count and time-to-event data with Stan, rstanarm and Torsten
- Introduction to PBPK modeling in R with mrgsolve