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| Congress Attendee |  | |
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| Email Address | Stefan.Roediger@b-tu.de@gmail.com | Include your email address in poster abstract book? Y / N |
| Telephone |  | |
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| Poster Title | dpcR - a Swiss-army knife for the analysis of digital PCR experiments | |
| Abstract (300 words approx.) | Different statistical analysis frameworks were proposed for the analysis of the digital Polymerase Chain Reaction (dPCR). However, most analysis is done in closed source software as provided by the vendors. This approach hinders the comparison of statistical outcomes, such as the confidence interval estimates. We established dpcR framework to provide all users of dPCR-related techniques an unified open software framework for reproducible research.  dpcR is versatile open source cross-platform software, which provides functions to process and study dPCR data independent of the hardware. Our software can be used for data analysis and presentation, as framework for novel technical developments and as reference for statistical methods in dPCR analysis. The main feature are two a novel methods of comparing dPCR experiments, the first based on Generalized Linear Model and the second on multiple ratio tests. The software incorporates also functions to estimate the underlying Poisson process, calculation of confidence intervals based on single samples as well as on replicates and a spatial randomness test for assessing plate effects. We use a plug-in like architecture and abstraction layers to make the framework usable for droplets and (real-time) chamber based technologies.  We based our software on the sophisticated statistical computing environment R, so the most fundamental interface is a command-line. To move the hurdle of learning new software from users to developers, we also designed a stand-alone graphical interface, accessible also as the interactive web application. The novices and quickly incorporate dpcR in their data processing routines by using the point-and-click interface, while experts can build a custom-made analysers according to their requirements.  The dpcR web-server can be accessed under the address <http://www.smorfland.uni.wroc.pl/dpcReport>. The stand-alone version can be downloaded from http://sourceforge.net/projects/dpcReport/. | |

Posters should be sized A0 (841mm x 1189mm) in portrait orientation.

We must receive the abstract on or before 2nd October 2015\*. **Abstracts received after this time may not be accepted so please submit your abstract at your earliest opportunity.**

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\*Please note – Global Engage reserves the right to change the date for submission without notice if all available poster spaces are filled prior to the above date.