**Software distribution**

This software is distributed as accompanying software for the article *Photon count estimation in single-molecule localization microscopy* by Rasmus Ø. Thorsen, Christiaan N. Hulleman, Sjoerd Stallinga and Bernd Rieger.

This distribution contains Matlab software to run the algorithms described in the article.

**Matlab**

The provided scripts use Matlab (<https://mathworks.com>) and have been tested working in version ‎R2017b. The scripts uses help functions from the DIPimage Toolbox and must be installed to make full use of the functions. DIPimage is a freely available image processing toolbox for Matlab (<http://www.diplib.org>).

In the directory matlabfun all relevant Matlab functions are included. There are three examples showcasing different computations: example1.m, shows the estimated photon count for a measured bead by a fully-fledged vectorial or simplified Gaussian PSF model compared to TRABI, example2.m, computes a vectorial through-focus PSF and the corresponding photometric ratio (Gaussian fit over TRABI value) as a function of the axial position, example3.m, computes the photometric ratio over six bead measurements. These examples depict part of the data shown in the figure from the article.

We hope that these examples are instructive enough to allow the interested user to apply our code. If you have any troubles please to not hesitate to contact us at the email address given below.

**Data availability**

Additional data is available for download at: doi: 10.4121/uuid:ea2ea179-26f4-4e1a-90e1-b2759b553ce8.

**Terms of use**

Copyright (C) 2018

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details (<https://www.gnu.org>).

Quantitative Imaging Group

Faculty of Applied Sciences

Delft University of Technology

Lorentzweg 1, 2628 CJ Delft

The Netherlands

contact: Bernd Rieger, b.rieger@tudelft.nl