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Introducing Methods Communications, a new category of contributions to *Acta Crystallographica F*

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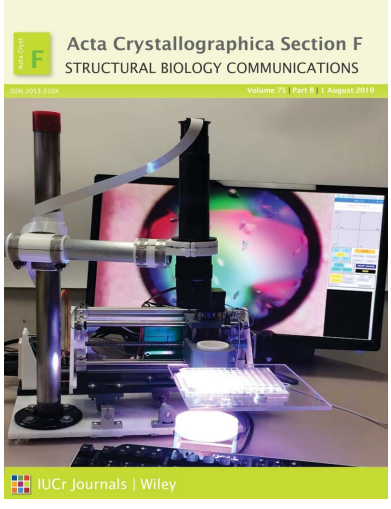
In this issue of *Acta Crystallographica F, Structural Biology Communications*, we publish our first Methods Communication (Bohm, 2019). Our Notes for authors define Methods Communications as 'brief descriptions of special methods, equipment modifications, techniques for accomplishing certain tasks related to any area of structural biology, including but not limited to sample preparation, crystallization, imaging, data collection, data processing, refinement, structure visualization and function characterization'. We hope that these papers will bring methods, tips and tricks that may otherwise be known only to a local community, to the attention of a broad worldwide audience, potentially smoothing the path to obtaining interesting biological structures for all of us. When compared with papers in our sister journal *Acta Cryst. D*, we would expect Methods Communications to be shorter and more concise but definitely not less interesting.

In the inaugural communication, Andrew Bohm describes how one can make an inexpensive imaging system suitable for a crystallization laboratory. The paper details how off-the-shelf components can be used to build a very specialized piece of kit. Some of the parts are 3D printed, and some are borrowed: the translation stage re-purposes the base of a commercially available CNC device. The computing power for driving the stage movement comes from an inbuilt Arduino based circuit board. This paper describes improvements to a camera system described previously (Bohm, 2018) – the inclusion of a Raspberry Pi device allowed the development of a graphical user interface (AMiGUI) which makes the entire system much more user friendly.

There is a strong tradition within science of rolling up your sleeves and building the necessary kit or tools to perform the experiment that needs to be done. Perhaps we sometimes forget that most of the shiny machines that we use daily in the laboratory generally started as home-grown devices, and that science is not just results but is also about the methods and approaches used to obtain the results. Within our community, there is also a strong tradition of understanding a process by 'hacking' your own version, for example the 'Amateur Scientist' section of the popular science magazine *Scientific American* has over 500 articles, collected over almost 200 years. This down-to-earth spirit is seen in the rise of DIY 'maker' communities who share tools and advice across the globe. However, it is often hard to find a forum where improvizations that become indispensible in a laboratory dedicated to structural biology can be shared amongst the wider community, and it is this lack of exposure that the new Methods Communication category hopes to address.

As a side note, we now also define Topical Reviews specifically as 'short reviews that aim to capture the current trend of a field or subfield. They may treat a broad topic concisely or a more narrow topic in more detail'. We have already published several Topical Reviews during the past few years and would like to welcome many more because they are useful for many readers and are often well cited. Again, when compared with our sister journal, we would expect these Topical Reviews to be shorter and more concise, but equally interesting.

Another feature we would like to promote is the use of multimedia for all kinds of contributions. Obviously, more and more scientific communications are read online and a direct link to a video or similar can make concepts much easier to understand, or add a significant additional point that is difficult to convey by text or a static figure. In



particular, we are hoping that judicious use of multimedia will make our new Methods Communications even more powerful.

References

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