Roland Bacon: 2020 Jackson-Gwilt Medal

Professor Roland Bacon has played a central role in the development and application of integral field spectroscopy, building the very first integral field unit, TIGER, which saw first light on the Canada France Hawaii Telescope (CFHT) in 1987. He went on to develop the CFHT's OASIS integral field spectrograph, the first such instrument fed by an adaptively corrected wavefront.

His next project, the SAURON spectrograph, was deployed at the William Herschel Telescope. Notable for its large field of view and high throughput, this instrument was used to conduct an extensive survey of the kinematics of early-type galaxies, changing our views of the formation and evolution of these objects.

The MUSE panoramic integral field spectrograph is a VLT 2nd-generation instrument constructed by an international consortium led by Professor Bacon. This sophisticated, versatile instrument saw first light in 2014 and quickly became the most oversubscribed instrument at Paranal. It consolidates integral field spectroscopy as a core technique in observational astrophysics.

The instruments for which Professor Bacon has been responsible have extraordinarily wide applications, and have been exploited by a broad and diverse community of astronomers in studies ranging from solar-system bodies to the distant universe. For his crucial leadership roles in these instruments, and particularly for the construction, commissioning, and use of MUSE, Professor Bacon is an exceptionally worthy honouree.

For these reasons, Professor Bacon is awarded the Jackson-Gwilt Medal.

Short citation

Professor Roland Bacon has played a central role in the development and application of
Integral field spectroscopy, from the very first integral field unit, TIGER, deployed at the CFHT in 1987, through to MUSE, the enormously successful VLT 2nd-generation instrument, and on to HARMONI, one of the E-ELT's first-light instruments, and its workhouse spectroscopic facility.

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