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## Analysis Seminar

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**M. Manolaki**

will speak on

### **Optimal polynomial approximants II**

Tue 12th February 2019 at 4:00PM

Location: SCN 125

Given a Hilbert space  $H$  of analytic functions on the unit disc and a function  $f$  in  $H$ , a polynomial  $p_n$  is called an optimal polynomial approximant of degree  $n$  if  $\|p_n f - 1\|$  minimizes  $\|p f - 1\|$  over all polynomials  $p$  of degree at most  $n$ . This notion was introduced to investigate the phenomenon of cyclicity in certain function spaces, including the classical Hardy, Bergman and Dirichlet spaces. In this talk, we will discuss the behaviour of the sequence of optimal polynomial approximants on subsets of the unit circle. Our main theorem uses a new result on simultaneous zero-free approximation, which is of independent interest. (Joint work with Catherine Bénéteau, Oleg Ivrii and Daniel Seco.)

This talk is part of the **Analysis** series. For more, see  
<https://maths.ucd.ie/seminars>