



Bilkent University  
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## PROBLEM OF THE MONTH

**Term:** April 2022

For a polynomial  $Q$  with integer coefficient and prime  $p$ , we say that  $Q$  excludes  $p$  if there is no integer  $n$  for which  $p \mid Q(n)$ . Does there exist a polynomial with integer coefficients having no rational roots which excludes exactly one prime?