

## Whitehead Prize: citation for Dawid Kielak

Shor ~~RLLODQPPWDORULMLWVWKHMLULFHWKHDQR~~ -

fk o g p u k q p c n " v q r q n q i { . " c p f " k p " r c t v k e w n c t " h q t " j k u " y q t m " q p " c w v q o q t r j k u o " i t q w r u " q h " f k u e t g v g " i t q w r u " c p f " L d t k p i u " q h " o c p k h q n f u " c p f " i t q w r u o

V j g " i t q w r u " A u t ( F

$n$ ) and  $Out(F_n)$  qh " c w v q o q t r j k u o u " c p f " q w v g t " c w v q o q t r j k u o u " q h " c " L p k v g n { - i g p g t c v g f " h t g g " i t q w r " c t g " u k o k n c t " k p " o c p { " y c { " u " v q " c t k v j o g v k e " n c v k e g u . " k p " r c t v k e w n c t " v j g " k p v g i t c n " general linear i t q w r "  $GL(n, \mathbb{Z})$  " J k i j n k i j v u " q h " M k g n c m o u " y q t m " q p " c w v q o q t r j k u o " i t q w r u " k p e n w f g " giving constrak p v u " q p " o c r u " d g v y g g p "  $Out(F_n)$  and  $Out(F_m)$  and (in joint with Baumeister and R k g t t q + " f g v g t o k p k p i " v j g " u o c n g u v " r q u u k d n g " L p k v g " s w q v k g p v u " q h "  $Aut(F_n)$ ), thus settling an old sw g u v k p " k p " i t q w r " v j g q t { 0 " O q v x c v k q p " h q t " u v w f { k p i " s w q v k g p v u " q h "  $Aut(F_n)$  comes from two long- u w c p f k p i " q r g p " r t q d n g o u " f t k x g p " d { " v j g " c p c n q i { " d g v y g g p "  $Aut(F_n)$  c p f " c t k v j o g v k e " i t q w r u . " p c o g n { " v j g " e q p i t w g p e g " u w d i t q w r " r t q d n g o " c p f " v j g " h c e v " v j c v " c t k v j o g v k e " i t q w r u " j c x g " M c | j f c p o u " R t q r g t v { " \* V + 0 " V j g " u q n w v k q p u " q h " v j g u g " r t q d n g o u " h q t " c t k v j o g v k e " i t q w r u " c t g " e t w e k c n " g n g o g p v u " q h " v j g k t " v j g q t { 0 " k p " c " u r g e v c e w n c t " f g x g n q r o g p v . " M k g n c m " u j q y g f " v j c v "  $Aut(F_n)$  f q g u " j c x g " R t q r g t v { " (T) for  $n \times 8$  " \* v j k u " k u " l q k p v " y q t m " y k v j " M c n w d c " c p f " P q y c m + 0 " V j g " r t q q h " g z r n q k v g f " d q v j " M k g n c m o u " g z r g t v k u g " q p "  $Aut(F_n)$  c p f " c " p g y " v g e j p k s w g " h q t " f g v g e v k p i " R t q r g t v { " \* V + " k p v t q f w e g f " d { " Q | c y c . "