



BLUE BULLETIN 5

GRADUATES

Congratulations to the following graduates:

- Pianos Chitanga: MSc Mathematics (supervisor: Prof Jan Harm van der Walt; co-supervisor: Dr Marten Wortel);
- Nthabiseng Mofokeng: BSc Honours Mathematics of Finance;
- Charles Rasego: BSc Honours Financial Engineering;
- Byran Taljaard; Vaughan van Appel; Pierre Venter: PhD Actuarial Science (supervisor: Professor Eben Maré).

COMPETITIONS

- **South African Tertiary Mathematics Olympiad**

136 students from across South Africa, with 16 of these students from UP, participated in the South African Tertiary Mathematics Olympiad on Saturday 20 August 2022. Our top three performing students were:

- Zerwick de Lange, 1st year, BSc: Physics, joint 8th in the country;
- Caleb Sindi, BScHons: Applied Mathematics, 11th in the country;
- Caleb de Nation, 2nd year, BSc: Applied Mathematics, joint 16th in the country.

- **Wits Mathematics Competition**

Six students from UP qualified for, and wrote, the final round of the Wits Mathematics Competition on Wednesday 14 September 2022. These students were:

- Caleb de Nation, 2nd year, BSc: Applied Mathematics;
- Michael Dreeckmeier, 1st year, BSc: Computer Science;
- Kgaugelo Mbhunjana, 2nd year, BEd: Senior Phase and FET Teaching;
- Shuaib Nuruddin, 2nd year, BSc: Computer Science;
- Sindi Pitikoe, 3rd year, BCom: Financial Sciences;
- Gerlo Theron, 1st year, BSc: Mathematics.

Their final results are not yet available.

- **South African Mathematics Team Competition**

This competition took place on Saturday 10 September 2022. Our department entered four teams, each with ten high school learners, on behalf of the Gauteng North region, for the 2022 ASSA South African Mathematics Team Competition. Many of these learners were enrolled in our Siyanqoba Programme this year. The performance of our teams was as follows:

- Junior Teams 1 and 2: respectively 8th and 6th nationally, out of 138 teams;
- Senior Teams 1 and 2: respectively 5th and 11th nationally, out of 132 teams.

PERSONALIA

BIRTHDAYS IN SEPTEMBER

10 - Jan Harm van der Walt
11 - Nic van Rensburg
13 - Gideon Brits
20 - Eben Maré
21 - Roumen Angelov
25 - Ruaan Kellerman
26 - Wanda Conradie

BIRTHDAYS IN OCTOBER

20 - Berge Tsanou
24 - Michael Chapwanya
25 - Rodwell Kufakunesu
25 - Hanlie Venter
30 - John van den Berg

NEW BORN

- SB Khanye and his wife had a baby boy (Tonny Molifi) on 17 June 2022
- R Kellerman and his wife had a baby boy (Sabastian) on 25 August 2022

LEAVE/RESEARCH VISITS

- MK Banda: 6-28 October 2022 in Germany; University of Mannheim and RWTH-Aachen.
- AS Jooste: 1 October to 31 December 2022
- SY Madanha: 3-30 July 2022 at the University of Birmingham.

CONFERENCES, SEMINARS AND WORKSHOPS

- CS Anabanti gave a talk titled "On nonpower subgroups of fixed sizes in groups" on 17 August 2022 at the 15-20 August 2022 Combinatorics, Computing, Group Theory and Applications (CCGTA) conference in South Florida.
- R Anguelov gave a talk titled "Quantifying assays: A Modeling tale of variability in cancer therapeutics assessed on cancer cells" at the Plant Science Auditorium, Hatfield Campus, University of Pretoria on 23 August 2022.
- J Banasiak gave a talk titled "Beyond the tanh method - looking for explicit travelling wave solutions" at the 20-24 July 2022 Sym Physical Workshop at the Premier Resort Sani Pass Hotel, Drakensberg, South Africa.
- J Banasiak was a plenary speaker at the 12th Euro-Maghrebian workshop on Evolution Equations at Agadir, Morocco, which held from 12-16 September 2022. He spoke on "Hyperbolic Systems and Equations on Networks - Recent Results and Open Problems".
- J Banasiak attended the 27-28 September 2022 Symposium on Machine Learning and Data Modelling in the Biomedical Sciences (MLDMBioMed-2022) at York University Canada, where he gave an invited (online) talk titled "Multiple time scales and long-term dynamics in malaria modelling".
- J Banasiak will give a talk titled "On spectral gaps of growth-fragmentation semigroups in higher moment spaces" at the Functional Analysis and Operator Theory South Africa (FAOTSA) 2022 Workshop which will hold from 30 September 2022 to 3 October 2022 at Berg-en-Dal conference centre, Kruger National Park, South Africa.
- J Banasiak was a co-organiser of the conference "Analysis and Differential Equations with Applications IV (ADEANS IV)", which held from 18-23 September 2022 in Premier Cutty Sark Hotel, Scottburgh, South Africa.
- MK Banda gave an invited talk titled "Well-posedness of junction solutions for blood flow dynamics in arterial networks" on 19 September at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.
- MK Banda will attend the 'Annual meeting of the DFG Priority Programme 1962' from 24-26 October 2022 at Novotel Berlin Mitte, Berlin, Germany.
- M Chapwanya gave an invited talk titled "Spatio-temporal dynamics of microbial population under environmental stress" on 20 September 2022 at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.
- YHN Dumont gave an invited talk titled "On the usefulness of mathematics in crop protection" on 19 September 2022 at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.
- M Gandhi gave a talk titled "Topological and Statistical Consistency in Learning Dynamics" at the School of Physical and Mathematical Sciences, Nanyang Technological University on 22 September 2022.
- E Kikianty and M Messerschmidt are co-organisers of the FAOTSA 2022 Workshop which will hold from 30 September 2022 to 3 October 2022 at Berg-en-Dal conference centre, Kruger National Park, South Africa.
- SY Madanha attended a day conference in honour of Jan Saxl on 22 July 2022 at the University of Cambridge.
- SY Madanha attended a workshop titled "Young Group Theorists Workshop: exploring new connections" which was hosted by SwissMap Research Station in Les Diablerets, Switzerland from 5-9 September 2022, where he gave a talk titled "Average number of zeros of characters of finite groups".
- CSM Maepa gave a talk titled "On mid p-summing algebras" on 31 August 2022 at the 31 August to 2 September 2022 International Conference on Topological Algebras and their applications.
- N Majozi gave a talk titled "A semigroup approach to a transport-fragmentation equation" on 20 September 2022 at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.
- A Matusse gave a talk titled "Traveling waves in co-infection model: The case of maize lethal necrosis" on 21 September 2022 at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.
- W Poka gave a talk titled "Global solvability of fragmentation-coagulation equations with growth" on 21 September 2022 at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.
- A Ramanantoanina gave a talk titled "Spatio-temporal dynamics of mutualistic populations" on 21 September 2022 at the 18-23 September 2022 ADEANS IV Conference in Scottburgh, South Africa.

A PUBLIC LECTURE

Professor Hendra Gunawan (of the Bandung Institute of Technology, Indonesia) will be giving a talk titled "How many sides does a circle have?" at Plant Science Auditorium of the University of Pretoria Hatfield Campus, from 17:30-18:30 on Tuesday, 4 October 2022.



PUBLICATIONS IN ISI/ACCREDITED JOURNALS

Congratulations to the following colleagues whose articles have been published

- CS Anabanti (with AB Aroh, SB Hart, AR Oodo) - *Quaest. Math.* 45(6)(2022), 901-910
- CS Anabanti (with SB Hart) - *Bull. Aust. Math. Soc.* 106(2)(2022), 315-319
- J Banasiak (with A Błoch) - *Evolution Equations and Control Theory* 11(6)(2022), 2165-2181
- M de Jeu (with Y Deng) - *Positivity* 26(4)(2022), 33 pp.
- M de Jeu (with X Jiang) - *Banach J. Math. Anal.* 16(3)(2022), 40 pp.
- JP de Wet, M Frick - *Discuss. Math. Graph Theory* 42(4)(2022), 1281-1312
- CA Emereuwa (with M Mohammed) - *Asymptotic Analysis* 129(3-4)(2022), 413-450
- M Gandhi - *IEEE Transactions on Neural Networks and Learning Systems* 33(6)(2022), 2596-2604
- J Lubuma, B Tsanou (with AJ Ouemba Tassé, JL Woukeng, F Signing) - *J. Biol. Systems* 30(1)(2022), 113-148
- J Lubuma, B Tsanou (with F Signing, S Bowong) - *Mathematics and Computers in Simulation* 204(2023), 43-70
- E Maré (with PJ Venter, L Alexis) - *Cogent Economics & Finance* 10(1)(2022); 2106631
- E Pindza (with M Alqhtani, KM Owolabi, KM Saad) - *Chaos, Solitons & Fractals* 161(2022); 112394
- TA Tegegn - *Entropy* 24(6)(2022), 28 pp.
- B Tsanou (with Y Fotso Fotso, S Touzeau, S Bowong, F Grogard) - *Appl. Math. Model.* 110(2022), 193-206
- B Tsanou (with CH Nkwayep, S Bowong, MA Aziz-Alaoui, J Kurths) - *Math. Med. Biol.* 39(1)(2022), 1-48
- B Tsanou (with C Tadmon, AF Feukouo) - *Nonlinear Anal. Real World Appl.* 67(2022), 36 pp.

Congratulations to the following colleagues whose articles have been accepted

- DJ Fresen - *Quaestiones Mathematicae*
- JM-S Lubuma, B Tsanou (with JC Kamgang, DEH Danga) - *Ricerche di Matematica*
- SY Madanha (with A Ballester-Bolinches, R Esteban-Romero, MC Pedraza-Aguilera) - *Bull. Aust. Math. Soc.*
- E Maré (with FF Koning, JP Swanepoel, JD Brits) - *SA Actuarial Journal*
- E Pindza (with KM Owolabi) - *Healthcare Analytics*
- TA Tegegn (with ZI Ali, PA Razafimandimby) - *Communications in Mathematical Sciences*

