

Scientific Report of

3rd International Congress: Algebra, Number Theory and their Applications (ICANTA-2019)

The « Arithmétique, Calcul Scientifique et Applications » Laboratory (ACSA) of the Sciences Faculty of the Mohammad Premier University, Oujda, Morocco, recently organized its third International Congress: Algebra, Number Theory and their Applications (ICANTA-2019).

This scientific event, held from 24 to 27 April, 2019 at the Oujda Knowledge Campus, was an opportunity for participants to present and discuss the latest novelties, publications and recent works in some fields of algebra and number theory.

The goal of this meeting is to promote the sharing of knowledge, research and new results in relation to the chosen themes

This conference brought together participants, including renowned mathematicians, from several countries, including Japan, Germany, France, Spain, Canada, Austria, Portugal, Algeria, Kuwait, Tunisia, Senegal, in addition to Morocco. Young doctoral researchers of different nationalities were also present to attend presentations and lectures on the latest results of the most interesting areas of research in algebra, number theory and their applications.

This scientific meeting was also marked by tributes to research professors, Moroccan and foreign, and the award of trophies in recognition to personalities for their role and contribution in the field of scientific research.

After the opening ceremony, the beginning of the exhibitions was with the guest and the main speaker of this meeting namely Professor Joseph Oesterlé, a former member of the Bourbaki team. He treated a topic titled: « Multiple Constant Stieltjes (after Biswajyoti Saha) ». Then Professor Bouchaib Sodaigui from « Université Polytechnique Hauts-De-France, Valenciennes, France » took the floor to give a presentation on « Galois module structure of integer rings and cyclic codes ». The next speaker was Professor Ayman Badawi from the Sharjah US University to speak about « Recent results on absorbing ideals of commutative rings ». This last one was followed by Professor Driss Essouabri from « Jean Monnet University (France) » to treat a subject named « On mean values of multivariable complex valued multiplicative functions and applications ». The first day of the congress was closed by the presentations of professors: Najib Mahdou, from the Faculty of Sciences and Technology, USMBA Fez, Morocco, who spoke « On Prufer-Like Conditions: A Survey », and Professor Ali Jaballah, from the University of Sharjah, who discussed the subject « Ring extensions quantified ».

The second day of the congress began with the presentation of Professor El Amin Kaidi, from the University of Almeria (Spain), his lecture is entitled « Spaces of Banach Hopfians or

semi-Hopsfiens ». Then, we attended a presentation under the title « From Polya Fields to Polya Groups » by Professor Jean-Luc Chabert, from the University of Picardie-Jules Verne. The last speaker, before the beginning of parallel sessions, was Professor Jean-Louis Verger-Gaugry, from Savoie Mont Blanc University, who spoke to us about « Fredholm Theory and Dynamical Systems of Numeration in Number Theory for Limit Problems - Conjecture of Lehmer ».

Concerning the third day of the congress, there were many speakers who took the floor successively:

- Thong Nguyen Quang Do, University of Franche-Comté, Besançon, France, with a talk entitled « On Greenberg's generalized conjecture for families of number fields ».
- Abbas Chazad Movahhedi, from Limoges University, France, the title of his talk was « p-rational number fields and a conjecture of Greenberg ».
- Abdelmajid Bayad, from the University of Evry Val d'Essonne, France, discussed a subject under the title « Thue equations and cubic number fields ».
- Abderrahmane Nitaj, from the University of Caen Normandy, France, he spoke on a topic of cryptography entitled « Homomorphic and Post Quantum Cryptography ».
- Takashi Fukuda, from Nihon University, Tokyo Institute of Technology, Japan, spoke about « Computing Invariants of Abelian Number Fields ».
- Yasuhiro Kishi, from Aichi University of Education, Japan, he discussed « Continued fraction expansions of \sqrt{d} with even period and quadratic fields with class number one ».
- Miho Aoki, Shimane University, Matsue, Japan, her presentation was entitled « A family of peers of abelian number fields with both class numbers divisible by p ».
- Lahcen Oukhtite, from the Faculty of Sciences and Technology, USMBA, Fez, Morocco, he spoke about a subject entitled « Classification of some special generalized derivations and endomorphisms of prime rings with involution ».

For the last day, the speakers were as follows:

- Claude Levesque, from the University of Laval, Canada, his presentation bearing the name « Resolution of certain equations of Thue ».
- Radan Kucera, from Masaryk University, Brno, Czechia, his talk was entiteled « On semi special units ».
- Daniel C. Mayer, from Karl-Franzens-Universität Graz, Graz, Austria, spoke about « Differential Principal Factors in Pure Metacyclic Fields ».

During the congress days there were more than 63 professors and doctoral students, Moroccans and foreigners, who presented communications covering the themes of the meeting.

Really, this scientific meeting was particular not only by the number of famous speakers in the areas of congress but also by participants from several countries and the topics that were discussed.

A special interest was given to young researchers in the framework of this international conference which aims to put them in direct contact with professors and PhD students from here and elsewhere and make them discover the recent contributions and researches in these areas.