



FACULTÉ DES SCIENCES DHAR EL MAHRAZ
UNIVERSITÉ SIDI MOHAMED BEN ABDELLAH

International Conference in
Algebra, Number Theory and Their Applications
October 27-28, 2022, Fez

(In Honor of Professors István Gaál and Claude Levesque)



FACULTÉ DES SCIENCES DHAR EL MAHRAZ
UNIVERSITÉ SIDI MOHAMED BEN ABDELLAH

Thursday, October 27, 2022	
8:30—9:00	Registration
9:00—9:20	Opening ceremony
	Chair: B. Ralph
9:20—10:10	M. Waldschmidt, Présentation de quelques résultats obtenus avec Claude Levesque dans 12 travaux en commun.
10:10—11:00	A. Zekhnini, <i>On the capitulation of some 2-classes.</i>
11:00—11:20	Coffee break
	Chair: I. Gaál
11:20—12:10	E. Goedhart, <i>Linear Recurrences and Powers of Primes.</i>
12:10—12:30	T. Pejčović, <i>Some properties of p-adic continued fractions.</i>
12:30—12:50	N. Armand, <i>Higher reciprocity law and Applications.</i>
12:50—14:30	Lunch
	Chair: O. Kihel
14:30—15:20	P. Voutier, <i>Linear forms in logs: a how-to guide (online)</i>
PARALLEL SESSIONS	
Session 1: Algebra	
Chair: M. Youness	
15:20—15:35	H. Aharassi, <i>Certain commutativity criteria for rings with involution involving symmetric and skew symmetric elements.</i>
15:40—15:55	K. Charabi, <i>Differential identities on prime ring with involution involving generalized derivations.</i>
16:00—16:15	S. Dakir, <i>On $*$-Strong Commutativity Preserving with endomorphisms.</i>
Session 2: Number theory	
Chair: A. Chillali	
15:15—15:35	H. Asensouyis and Y. Mazigh, <i>Poitou-Tate Duality for totally positive Galois cohomology.</i>
15:40—15:55	M. M. Chems-eddin, <i>On the cyclotomic $\mathbb{Z}_2$-extensions of some special Dirichlet fields.</i>
16:00—16:15	A. Hatimi, <i>Algebraic equations and companion matrix.</i>

Session 3: Analysis Chair: Z. Mouhcine	
15:20—15:35	O. Ozraibi , <i>An entropy solutions for some nonlinear elliptic problem in Musielak-Orlicz spaces.</i>
15:40—15:55	K. Bouabid , <i>Infinitely many positive energy solutions for an elliptic equation involving critical Sobolev growth, Hardy potential and concave-convex nonlinearity.</i>
16:00—16:15	M. Idrissi , <i>On obstacle problem for nonlocal elliptic hemivariational inequalities.</i>
16:15—16:35	Coffee break

Session 1: Number Theory (Online) Chair: M. Sahmoudi	
16:35—16:50	S. Kebli , <i>Primes, permutations and Catalan number.</i>
16:55—17:10	R. Ould Mohamed , <i>Irreducibility and multiplicative composition of polynomials over finite fields.</i>
17:15—17:30	B. Earp-Lynch , <i>Powers of small primes expressible as a sum of five or fewer Fibonacci numbers.</i>
17:35—18:50	S. Earp-Lynch , <i>A Diophantine equation involving powers of a Lucas sequence of the first kind.</i>
Session 2: Cryptography Chair: N. Armand	
16:35—16:50	A. Tall , <i>Fast exponentiation and continued fractions for use in elliptic curve cryptography.</i>
16:55—17:10	S. Ezzouak , <i>Classification Attacks on Elliptic Curve Discrete Logarithm Problem.</i>
17:15—17:30	I. Assoujaa , <i>Tower building technique on elliptic curve with embedding degree 18.</i>
17:35—18:50	Z.Cheddour , <i>Torsion of elliptic curves over some imaginary biquadratic number fields of class number 1.</i>
Session 3: Analysis Chair: M. Rossafi	
16:35—16:50	Z. Zaim , <i>Two disjoint and infinite sets of solutions for an elliptic equation with critical HARDY-SOBOLEV-MAZ'YA term with concave-convex nonlinearity.</i>
16:55—17:10	M. Masmodi , <i>Two disjoint and infinite sets of solutions for a concave-convex critical fractional Laplacian equation.</i>
17:15—17:30	M. Chakiri , <i>Alienation of two trigonometric functional equations.</i>
17:35—18:50	G. Diki , <i>A five-dimensional fractional model for mapping vesicle dynamics in the rigid sphere.</i>

Friday, October 28, 2022

Chair: G. Eva

09:00—09:50

I. Gaál: *Power integral bases in algebraic number fields.*

PARALLEL SESSIONS

Session 1: Algebra

Chair: Y. Elfrom

09:50—10:05

S. Chouingou, *Halperin Conjecture Survey.*

10:10—10:25

M. Moumen, *Differential identities on Banach algebras with derivations.*

10:30—10:45

L. Taoufiq, *Commutativity of Banach algebras and some Differential Identities.*

Session 2: Number theory

Chair: T. Pejković

09:50—10:05

M. Sahmoudi, *On monogenity of a family of relatives extensions.*

10:10—10:25

A. Soullami, *On relative monogeneity of a family of number fields defined By $\$X^{p^n} + aX^{p^s} - b\$.$*

10:30—10:45

O. Boughaleb, *Multiplicative content and Integral Basis over a UFD.*

Session 3: Cryptography

Chair: S. Ezzouak

09:50—10:05

I. Elmouki, *LLL Attack on GGH: From Theory to Programming.*

10:10—10:25

A. Grini, *Twisted Hessian Curve El Gamal Cryptosystem.*

10:30—10:45

M. B. T. Elhamam, *New group law of the twisted Hessian curve over the ring.*

10:45—11:05

Coffee break

Session 1: Algebra

Chair: S. Chouingou	
10:05—11:20	A. Anebri, <i>A new generalization of finite conductor rings.</i>
11:25—11:40	A. Assarrar, <i>A new characterization of Graded-S-coherent rings.</i>
11:45—12:00	Y. El Haddaoui, <i>On generalization of coherent modules over ϕ-rings.</i>
12:00—12:20	S. E. Mahdou, <i>On S-Coherent property in amalgamated algebra along an ideal.</i>
Session 2: Number theory	
Chair: A. Soulami	
10:05—11:20	M. Fariss, <i>On the extension of a non-Archimedean absolute value.</i>
11:25—11:40	H. Ben Yakkou, <i>On monogeneity of certain pure number fields of degrees $2^r \cdot 3^k \cdot 7^s$.</i>
11:45—12:00	O. Kchit, <i>On index divisors and monogeneity of certain number fields defined by x^7+ax^3+b.</i>

Session 3: Analysis	
Chair	
10:05—11:20	M. Khouakhi, <i>Strongly Nonlinear Parabolic Equations With Natural Growth In General Domains.</i>
11:25—11:40	A. Bouhamed, <i>An output of Kirchhoff Plate Equation with Bilinear Boundary controls.</i>
11:45—12:00	N. Kamali, <i>On a class of Kirchhoff type problem involving the general nonlocal integro-differential operators.</i>
12:05—12:20	S. Bouda, <i>Exact solutions to a fractional differential system describing vesicle dynamics under a linear shear flow.</i>
	Chair: A. Zekhnini
12:20—13:10	M. Ayad, <i>Irreducibility of the iterates of a polynomial over a finite field (Online)</i>
13:00—15:00	Lunch
	Chair: L. El Fadil
15:00—15:50	B. Ralph, <i>Can Mathematics Recognize Great Art (Public audience)</i>
15:50—	Guided visit Of Old Medina