



CURRICULUM VITAE

Personal information

- **Personal**
 - Prof. OUSSAEIF Taki Eddine
 - Professor, Mathematics and Computer Science department, University of Oum El Bouaghi, Algeria.
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 - Google Scholar: <https://scholar.google.com/citations?user=0r9nzqAAAAAJ&hl=en>
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Education

- **Ph.D.'s degree** in Applied Mathematics (University of Oum El Bouaghi) under the supervision of Prof. Dr. Bouziani Abdelfatah.
Title of the thesis: Study of solution of problems for a class of partial differential equations with nonlocal condition.
- **Master's degree** in Applied Mathematics (LMD, University of Oum El Bouaghi).
With memory theme: Reliability of consecutive k out of n system.
- **License's degree** in fundamental Mathematics. (LMD, University of Tebessa) ;
With memory theme: The study of the consistency and stability of the finite difference method for linear and non-linear parabolic equation in the dimensions 1, 2 and 3.

Functions and Affiliations

- **Associate professor of Mathematics, Oum El Bouaghi University** since september 2016 until now.
- **Head of Department of Mathematics and Computer Science**, University of Oum El Bouaghi, Algeria

Teaching modules

Linear programming , Partial Differential Equations, Analysis 1, Probability and statistics, Analysis 2,
Analysis 4, Mathematics Didactics

International publications

- **1. O. Taki-Eddine**, B Abdelfatah; A priori estimates for weak solution for a time-fractional nonlinear reaction-diffusion equations with an integral condition, **Chaos, Solitons & Fractals**, V 103 P 79–89; 2017.
<http://www.sciencedirect.com/science/article/pii/S0960077917302308>
- **2. Taki-Eddine Oussaeif**, Bouziani Abdelfatah; Inverse problem of a hyperbolic equation with an integral overdetermination condition, **Electronic Journal of Differential Equations**; Vol. 2016 (2016), No. 138, pp. 1-7.
<http://ejde.math.txstate.edu/Volumes/2016/138/oussaeif.pdf>
- **3. T-E Oussaeif**, A Bouziani; Existence and uniqueness of solutions to parabolic fractional differential equations with integral conditions, **Electronic Journal of Differential Equations**; Vol. 2014 (2014), No. 179, pp. 1-10.
<http://ejde.math.txstate.edu/Volumes/2014/179/abstr.html>
- **4. T-E Oussaeif**, A Bouziani, Mixed Problem with an Integral Two-Space-Variables Condition for a Parabolic Equation. **International Journal of Evolution Equations**, V 9, N 2, pp. 181-198.
https://www.novapublishers.com/catalog/product_info.php?products_id=53602
- **5. A Mixed Problem with an Integral Two-Space-Variables Condition for Parabolic Equation with The Bessel Operator**, Bouziani Abdelfatah, **Oussaeif Taki-Eddine**, and Ben Aoua Leila, **Journal of Mathematics**. V 2013 (2013), Article ID 457631, 8 pages.
<http://www.hindawi.com/journals/jmath/2013/457631/>
- **6. Mixed Problem with an Integral Two-Space-Variables Condition for a Class of Hyperbolic Equations**, **Taki-Eddine Oussaeif** and Abdelfatah Bouziani. **International Journal of Analysis**, V 2013 (2013), Article ID 957163, 8 pages.
<http://www.hindawi.com/journals/ijanal/2013/957163/>
- **7. T-E Oussaeif**, A Bouziani and N Gattal, Numerical Solution of Mixed Problem of Parabolic Equation with an Integral Conditions by using Finite Difference and Orthogonal Function Approximation, **Mathematica Moravica**, Vol. 16-2 (2012), 89-98.
http://www.moravica.ftn.kg.ac.rs/Vol_16-2/Vol_16-2.htm
- **8. T-E Oussaeif**, A Bouziani; An Inverse Coefficient Problem for a Parabolic Equation under Nonlocal Boundary and Integral Overdetermination Conditions, **IJPDEA** 2014, 2(3), 38-43.
<http://pubs.sciepub.com/ijpdea/2/3/1/>

- 9. T.-E. Oussaeif, A. Bouziani, "Solvability of nonlinear viscosity equation with a boundary integral condition", **J. Nonl. Evol. Equ. Appl.** 2015 (3) (2015) pp. 31-45.

<http://www.jneea.com/?2015-3>

- 10. OUSSAEIF TAKI-EDDINE, ABDELKRIMALIOUCHE. FIXED POINT THEOREMS IN \mathbb{R}^2 o. 2 (2014), Pages : 96-101.

<http://www.konuralpjournalmath.com/matder/dosyalar/makale-106/kjm131205.pdf>

- 11. Mixed Problem with an Integral Two-Space-Variables condition for a Third Order Parabolic Equation., Oussaeif Taki Eddine, Bouziani Abdelfatah., **International Journal of Analysis and Applications**, V 12 No. 2 (2016), Pages : 98-117.

<http://etamaths.com/index.php/ijaa/article/view/789/226>

- 12. Oussaeif Taki-Eddine, Bouziani Abdelfatah, Nonlocal problem for a third order partial differential equation of mixed type with an integral two-space-variables condition, **Communications in Optimization Theory**; Vol. 2017 (2017), Article ID 16, pp. 1-16

<http://cot.mathres.org/archives/662>

- 13. Oussaeif Taki-Eddine, Bouziani Abdelfatah, ON DETERMINING THE COEFFICIENT IN A PARABOLIC EQUATION WITH NONLOCAL BOUNDARY AND INTEGRAL CONDITION; **Electronic Journal of Mathematical Analysis and Applications (EJMAA)**; V 6 Issue1(2018), Pages94-102.

- 14. Oussaeif Taki-Eddine, Bouziani Abdelfatah, ON A CLASS OF HYPERBOLIC EQUATION WITH AN INTEGRAL TWO-SPACE-VARIABLES CONDITION WITH THE BESSEL OPERATOR; **Advanced Studies in Contemporary Mathematics** 28 (No. 1)(2018), 83 – 92.

[http://fcagegypt.com/Journals/EJMAA/Vol6\(1\)Papers/Volume6\(1\)Paper8Abstract.html](http://fcagegypt.com/Journals/EJMAA/Vol6(1)Papers/Volume6(1)Paper8Abstract.html)

- 15. **Oussaeif Taki-Eddine**, Bouziani Abdelfatah, Solvability of Nonlinear Goursat Type Problem for Hyperbolic Equation with Integral Condition; **Khayyam Journal of Mathematics** 4 (2), 198-213 (2018), Pages94-102.

- 16. Dhelis Sofiane, Bouziani Abdelfatah, **Oussaeif Taki-Eddine**, Study of Solution for a Parabolic Integro-differential Equation with the Second Kind Integral Condition, **Int. J. Anal. Appl.**, 16 (4) (2018), 569-593.

- 17. Djamila Chergui, **Taki Eddine Oussaeif**, Merad Ahcene; Existence and uniqueness of solutions for nonlinear fractional differential equations depending on lower-order derivative with non-separated

type integral boundary conditions; AIMS Mathematics, 2019, 4(1): 112-133.

- **18.** Khaled Berrah, Abdelkrim Aliouche and **Taki eddine Oussaief**; Common fixed point theorems under Pata's contraction in complex valued metric spaces and an application to integral equations; Boletín de la Sociedad Matemática Mexicana, 2019.
- **19.** Khaled Berrah, Abdelkrim Aliouche and Taki eddine Oussaief; Applications and theorem on common fixed point in complex valued b-metric space; AIMS Mathematics, 2019, 4(3): 1019-1033.
- **20.** Rezzoug Imad and **Oussaief Taki-Eddine**; Approximate Controllability. V19.pp14-19.2020. WSEAS TRANSACTIONS on SYSTEMS. DOI: 10.37394/23202.2020.19.3
- **21.** A. Abdelhalim, A. Aliouche, L. Ben Aoua and O. Taki-Eddine, Common coupled fixed point theorems for two pairs of weakly compatible mappings in Menger metric spaces, Moroccan J. of Pure and Appl. Anal. (MJPAA), 5(2019), No.2, 197-221. DOI:10.2478/mjpaa-2019-0015
- **22.** Saker Meriem, Oussaief Taki-Eddine; Solvability and Blow-up of Solutions of Semi Linear Parabolic Problem with Integral Condition of Second Type, Bulletin of the Institute of Mathematics Academia Sinica (New Series) 03/2020; 15(1)
- **23.** Sihem benamira, Taki eddine oussaief and Bouziani abdefatah, study a semi-linear pseudo-parabolic problem with Neumann and integral conditions by using Galerkin mixed finite element method; Communications in Nonlinear Analysis Volume 9, Issue 1; Pages 1-20
- **24.** Rezzoug imad, Oussaief taki-eddine and Benbrahim abdelouahab, solvability of a solution and controllability for nonlinear fractional differential equations, bulletin of the institute of mathematics vol. 15 (2020), no. 3, pp. 237-249
- **25.** Nonlinear coupled coincidence and coupled fixed point theorems for weakly compatible mappings in partially ordered probabilistic metric spaces, articles in press, accepted manuscript, available online from 05 february 2020, Saurabh manro; Abdelkrim abdelhalim, Ben aoua leila, Abdelkrim aliouche, Oussaief taki-eddine.
- **26.** B. Sihem, **O. Taki Eddine** and B. Abdelfatah; Galerkin Finite Element Method for a Semi-linear Parabolic Equation with Purely Integral Conditions: Bol. Soc. Paran. Mat: doi:10.5269/bspm.44918. **in Press**

- **27.** Benaoua antara, **Oussaeif taki-eddine** and Rezzoug imad; Unique solvability of a Dirichlet problem for a fractional parabolic equation using energy-inequality method; *Methods Funct. Anal. Topology* 26 (2020), no. 3, 216-226
- **28.** Khaled Berrah, **Taki eddine Oussaeif & Abdelkrim Aliouche** (2021) Common fixed point theorems of Meir-Keeler contraction type in complex valued metric space and an application to dynamic programming, *Journal of Interdisciplinary Mathematics*, 25 (2), 445-461, DOI: 10.1080/09720502.2021.1932862
- **29.** T. Laib, I. Rezzoug, and **T.-E. Oussaief**, “Instantaneous sentinel for the identification of the pollution term in Navier-Stokes system”, *Proyecciones Journal of Mathematics*, Vol. 40, No 6, pp. 1489-1505, 10.22199/issn.0717-6279-4225
- **30.** **Adel Ouannas**, Amina Aicha Khennaoui, **Taki-Eddine Oussaeif**, **Viet-Thanh Pham**, **Giuseppe Grassi** and **Zohir Dibia**; Hyperchaotic fractional Grassi–Miller map and its hardware implementation, *Integration* Volume 80, September 2021, Pages 13-19
- **31.** Rezzoug Imad , Dehilis Soffane and **Oussaeif Taki-Eddine**; *Boundary control of a heat equation*, *Asia Matematika*, Volume: 5, Issue: 1 , (2021) Pages: 28- 43
- **32.** R Imad, **O Taki-Eddine**, Solvability of a solution and controllability of partial fractional differential systems, *Journal of Interdisciplinary Mathematics*, 2021, doi.org/10.1080/09720502.2020.1838754.
- **33.** Huntul, M. J., **Oussaeif, T.** (2022). Solvability of the Nonlocal Inverse Parabolic Problem and Numerical Results. *Computer Systems Science and Engineering*, 40(3), 1109–1126.
- **34.** Rezzoug Imad, **Oussaeif Taki-Eddine** and Benbrahim Abdelouahabe Regularization of a class of ill-posed Cauchy problems associated with generators of analytic semigroups, *Palestine Journal of Mathematics*, Vol. 11(1)(2022) , 485–495.
- **35.** MJ Huntul, **TE Oussaeif**, M Tamsir, MA Aiyashi, Unique solvability for an inverse problem of a nonlinear parabolic PDE with nonlocal integral overdetermination condition, *Open Mathematics*, 20, 1, 2022
- **36.** A Hioual, **TE Oussaeif**, Stability analysis and synchronization of incommensurate fractional-order neural networks, *Innovative Journal of Mathematics (IJM)*, 1,1, 2022.

- 37. S Benamira, T Oussaeif, Finite Element Method and numerical study for a super-linear reaction-diffusion problem with integral conditions, *Innovative Journal of Mathematics (IJM)*, 1,1, 2022.
- 38. S Benamira, T Oussaeif, Finite Element Method and numerical study for a super-linear reaction-diffusion problem with integral conditions, *Innovative Journal of Mathematics (IJM)*, 1,1, 2022.
- 39. Hioual, A.; Ouannas, A.; Grassi, G.; Oussaeif, T.E. Nonlinear nabla variable-order fractional discrete systems: Asymptotic stability and application to neural networks. *J. Comput. Appl. Math.* 2022, 423, 114939
- 40. Hioual, A.; Ouannas, A.; Oussaeif, T.E.; Grassi, G.; Batiha, I.M.; Momani, S. On Variable-Order Fractional Discrete Neural Networks: Solvability and Stability. *Fractal Fract.* 2022, 6, 119.
- 41. Djenina, N.; Ouannas, A.; Oussaeif, T.-E.; Grassi, G.; Batiha, I.M.; Momani, S.; Albadarneh, R.B. On the Stability of Incommensurate h -Nabla Fractional-Order Difference Systems. *Fractal Fract.* 2022, 6, 158
- 42. Oussaeif, T.E.; Antara, B.; Ouannas, A.; Batiha, I.M.; Saad, K.M.; Jahanshahi, H.; Aljuaid, A.M.; Aly, A.A. Existence and Uniqueness of the Solution for an Inverse Problem of a Fractional Diffusion Equation with Integral Condition. *J. Funct. Spaces* 2020, 2020, 7667370
- 43. Benbrahim Abdelouahab, Taki-Eddine Oussaeif, Adel Ouannas, Khaled M. Saad, Hadi Jahanshahi, Ahmed Diar, Awad M. Aljuaid, Ayman A. Aly, "A Nonlinear Fractional Problem with a Second Kind Integral Condition for Time-Fractional Partial Differential Equation", *Journal of Function Spaces*, vol. 2022, Article ID 2913587, 9 pages, 2022. <https://doi.org/10.1155/2022/2913587>
- 44. HIOUAL, A OUANNAS, TE OUSSAEIF, Z LAOUAR, On fractional variable-order neural networks based on the Caputo derivative, *ICPAM - VAN 2022*).
- 45. Djenina, N.; Ouannas, A.; Batiha, I.M.; Grassi, G.; Oussaeif, T.E.; Momani, S. A novel fractional-order discrete SIR model for predicting COVID-19 behavior. *Mathematics* 2022, 10, 2224
- 46. Gasri, A.; Ouannas, A.; Khennaoui, A.A.; Grassi, G.; Oussaeif, T.E.; Pham, V.T. Chaotic fractional discrete neural networks based on the Caputo h -difference operator: Stabilization and linear control laws for synchronization. *Eur. Phys. J. Spec. Top.* 2022, 231,1–15.
- 47. Ben Aoua Leila, Khaled Berrah, Taki Eddine Oussaeif, Saurabh Manro, Common fixed point theorems in intuitionistic Menger space using property EA and an application to Fredholm integral equations, *Journal of Interdisciplinary Mathematics*, (MJPA), 25(2022), 8.
- 48. Iqbal M Batiha, Leila Ben Aoua, Taki-Eddine Oussaeif, Adel Ouannas, Shamseddin Alshorman, Iqbal H Jebri, Shaher Momani, Common Fixed Point Theorem in Non-Archimedean Menger PM-Spaces Using CLR Property

with Application to Functional Equations, *IAENG International Journal of Applied Mathematics*, Vol. 53, Iss. 1, (Mar 2023): 1-9.

- 49. Hioual, A.; Oussaeif, T.E.; Ouannas, A.; Grassi, G.; Batiha, I.M.; Momani, S. New results for the stability of fractional-order discrete-time neural networks. *Alex. Eng. J.* 2022, 61, 10359–10369.
- 50. Hioual, A.; Ouannas, A.; Grassi, G.; Oussaeif, T.E. Nonlinear nabla variable-order fractional discrete systems: Asymptotic stability and application to neural networks. *J. Comput. Appl. Math.* 2022, 423, 114939.
- 51- **Zainouba Chebana, Taki Eddine Oussaeif, Dehilis Sofiane and Leila Benaoua , A priori estimate and numerical study of solution for a parabolic equation with nonlinear integral condition, Bulletin of the Institute of Mathematics Academia Sinica (New Series) Vol. 17 (2022), No. 1, pp. 83-103.**
- 52- **Bourabta Ahmed, Taki-Eddine Oussaeif, Rezzoug Imad and Zainouba Chebana , Solvability of solution of singular and degenerate fractional nonlinear parabolic Dirichlet problems,; Bulletin of the Institute of Mathematics Academia Sinica (New Series) Vol. 17, No. 1, pp. 105-123.**
- 53- **Anakira, N., Chebana, Z., Oussaeif, T.-E., Batiha, I. M., & Ouannas, A. (2022). A STUDY OF A WEAK SOLUTION OF A DIFFUSION PROBLEM FOR A TEMPORAL FRACTIONAL DIFFERENTIAL EQUATION. *Nonlinear Functional Analysis and Applications*, 27(3), 679–689. <https://doi.org/10.22771/NFAA.2022.27.03.14>**
- 54- **Iqbal M Batiha, Zainouba Chebana, Taki-Eddine Oussaeif, Adel Ouannas, Shamseddin Alshorman, and Amjed Zraiqat , Solvability and Dynamics of Superlinear Reaction Diffusion Problem with Integral Condition, IAENG International Journal of Applied Mathematics. volume 53 ,ISSUE 1, 2023, 113-121.**
- **55-Chebana Zainouba, Oussaeif Taki-Eddine, Benoua Leila, Ouannas Adel, Solvability of the solution of class of fractional Fujuta problems by the energy inequality; 2022, EJMCA, issue 3.**
- 56- **Taki-Eddine Oussaeif, Zainouba Chebana and Adel Ouannas, Solvability of nonlinear hyperbolic equation with the nonlinear integral Neumann conditions, the Bulletin of the Institute of Mathematics Academia Sinica, Vol 17 No.3, 2022**
- 57- **Iqbal Batiha, Zainouba Chebana, Taki-Eddine Oussaeif, Adel Ouannas, Iqbal H. Jebri, Mutaz Shatnawi Solvability of Nonlinear Wave Equation with Nonlinear Integral Neumann Conditions; International Journal of Analysis and Applications. Accepted**

- **58-** *Solvability of Non-Local Parabolic Problem with Numerical Solution; No.5101,BULLETIN (N.S.) Vol.18 No.1*
- **59-SOLVABILITY AND BLOW-UP OF THE WEAK SOLUTION FOR A SEMI-LINEAR BESSEL PROBLEM WITH NEUMANN INTEGRAL CONDITION**
- **60-SOLVABILITY OF NONLINEAR WAVE EQUATION WITH NONLINEARINTEGRAL NEUMANN CONDITIONS; CHEBANA Zainouba, Oussaeif Taki-Eddine, Ouannas Adel; EURASIAN JOURNAL OF MATHEMATICALAND COMPUTER APPLICATIONS. **Accepted****
- **61-On a Weak Solution of a Fractional-order Temporal Equation ,September 2022, Mathematics and Statistics 10(5):1116-1120**
- **62-SOLVABILITY OF NONLINEAR WAVE EQUATION WITH NONLINEAR INTEGRAL NEUMANN CONDITIONS; Chebana Zainouba, Oussaeif Taki-Eddine, Ouannas Adel;EURASIAN JOURNAL OF MATHEMATICAL AND COMPUTER APPLICATIONS ; ISSN 2306–6172, Volume , Number (20)**
- **63-Solvability of Dirichlet Problem For a Fractional Partial Differential equation by using energy inequality and Faedo-Galerkin method; Zainouba Chebana, Taki-Eddine Oussaeif, Adel Ouannas, Iqbal M. Batiha; Innovative Journal of Mathematics, Vol. 1(1), 34-44. (2022)**
- **64-Solvability and dynamics study of a weak solution for a nonlinear parabolic problem with the bessel operator; Chebana Zainouba, Oussaeif Taki-Eddine; Innovative Journal of Mathematics (IJM) 1 (1), (2022); 93-10**
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Research topics:

- ✓ **1.** Partial differential equations (PDE).
- ✓ **2.** Fractional PDE.
- ✓ **3.** Reliability of system.
- ✓ **4.** Fixed point theorems.

Diverse :

- Enthusiast Sports, Music, Reading, Computer.
- Initiative and sense of responsibility.
- Communication direction and a good team spirit.