

## CURRICULUM VITAE

### INFORMAȚII PERSONALE

Nume

**Berbente, Sorin**

Adresă(e)

Telefon(oane)

Fax(uri)

E-mail(uri)

Naționalitate(-tăți)

Română

Data nașterii

### EXPERIENȚA PROFESIONALĂ

Perioada (de la – până la)

2012 – prezent CS3 - INCAS, Bucuresti

2006 – prezent lector universitar, Facultatea de Inginerie Aerospațială UPB

2002 – 2006 asistent universitar, Universitatea Româno-Britanică.

1999 asistent universitar, Facultatea de Inginerie Aerospațială UPB .

1998 preparator, Facultatea de Inginerie Aerospațială, UPB .

1996 – 1997 inginer aeronave, departamentul de aviație UPB.

Numele și adresa angajatorului

INCAS, Bucuresti, 220, Iuliu Maniu Blvd, sector 6,

Universitatea Politenica Bucuresti, Splaiul Independenței nr. 313, sector 6, București

Tipul activității sau sectorul de activitate

Aerospațial - cercetare

Invatamant universitar

Funcția sau postul ocupat

CS3

Principalele activități și responsabilități

Cercetare aerospațială, Director de proiect infrastructura: AERO-VR (fonduri structurale europene),

Director de proiect: **Dezvoltarea unui mediu virtual integrat pentru analiza de incidente aviatice și elaborarea de scenarii de siguranță pentru operarea aeronavelor 2019-2022**

Director de proiect: **Dezvoltare de capacitati avansate de simulare in mediu cu realitate virtuala pentru sisteme aerospațiale 2018 -2020 (Proiecte de finanțare a excelenței în CDI, PNCDI III)**

Director de proiect: **Simulatoare avansate pentru probleme de integrare vehicule in spatiu aerian nesegregat 2016-2017**

Director de proiect: **Laborator cu realitate virtuala pentru conceptie sisteme aerospațiale. INCAS (2014 - 2015) - Fonduri structurale europene**

Informații suplimentare:

(12 Articole indexate ISI, 30 articole indexate BDI din totalul de 59 articole Științifice)

(Anexă – listă lucrări publicate)

### EDUCAȚIE ȘI FORMARE

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--|--|
| Perioada (de la – până la)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Febr 2007 - Doctor în INGINERIE AEROSPAȚIALĂ, febr. 2007<br>Nov.1996 - Ian.1997 Bursă DAAD Germania<br>1996 - 1997 Studii post-universitare (MASTER), Elemente speciale de inginerie aerospațială<br>1996 Inginer Aeronave, Specialitatea Instalații și Aparate de Bord<br>1991 - 1996 Facultatea de AERONAVE, Universitatea POLITEHNICA București<br>1987 - 1991 Liceul Teoretic Sf. SAVA (N. Bălcescu), București<br>Universitatea Politehnica Bucuresti |          |  |  |
| Numele și tipul instituției de învățământ și al organizației profesionale prin care s-a realizat formarea profesională                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Universitatea Politehnica Bucuresti                                                                                                                                                                                                                                                                                                                                                                                                                        |          |  |  |
| Domeniul studiat / aptitudini ocupaționale                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Inginerie aerospatuala                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |  |  |
| Tipul calificării / diploma obținută                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Doctor în inginerie aerospațială, diplomă de licență inginer aeronave                                                                                                                                                                                                                                                                                                                                                                                      |          |  |  |
| Nivelul de clasificarea formei de instruire/ învățământ în sistemul național sau internațional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Doctorat, Studii postuniversitare, Invatamant universitar                                                                                                                                                                                                                                                                                                                                                                                                  |          |  |  |
| <b>APTITUDINI ȘI COMPETENȚE PERSONALE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |
| dobândite în cursul vieții și carierei dar care nu sunt recunoscute neapărat printr-un certificat sau diplomă                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | depanare hardware și software calculatoare, laptop-uri                                                                                                                                                                                                                                                                                                                                                                                                     |          |  |  |
| Limba(ile) maternă(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | română                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |  |  |
| Limba(ile) străină(e) cunoscută(e)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Engleza, franceza                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Engleza                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Franceza |  |  |
| abilitatea de a citi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | C1                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A2       |  |  |
| abilitatea de a scrie                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | C1                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A2       |  |  |
| abilitatea de a vorbi                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | B2                                                                                                                                                                                                                                                                                                                                                                                                                                                         | A2       |  |  |
| <b>Aptitudini și competențe organizatorice</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |
| Director de proiect AERO-VR, INCAS Bucuresti.<br>experiență in management de proiect - am lucrat într-o echipă ce a realizat management de proiecte in cadrul Ministerului Sănătății                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |
| Sisteme de operare : MS - DOS, Windows 3.1 - 3.x, Windows 95, 98, Windows 2000, Windows 2003 server, Windows Vista, Windows 7, Windows 8, Linux (Instalare, Configurare, Utilizare).<br>Protocoloale INTERNET Windows 95, 98, Millennium, Windows 2000, Windows XP Professional, Windows 2003 server, Windows Vista, Windows 7, 8, 8.1, 10<br>Programare : Delphi, Pascal 7.0 , 6.0, Fortran 95,<br>Programe specializate de Firmă :<br>Catia 5 V21, Matlab, Matcad, Mathematica 7.0, 8.0, 9.0<br>Word for Windows 7.0, '97, 2000, 2007, 2010, Excel.<br>Corel Draw 12,10, 9.0 .<br>Autodesk 3D STUDIO, Animator PRO. |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |
| Procesare imagine digitală : Paint Shop Pro, PhotoShop<br>Aldus PHOTOSTYLER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |
| depanare hardware și software calculatoare, laptop-uri.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                            |          |  |  |

Permis(e) de conducere  
Alte aptitudini și competențe

Anexe

Categoria B

Conducere ambarcatiuni cu motor (hobby)

Lista de lucrari publicate

(12 Articole indexate ISI, 30 articole indexate BDI din totalul de 59 articole )

Semnătura:

Anexă CV

## LISTA DE LUCRĂRI PUBLICATE:

### Articole:

- 1.A. Stoica, **S. Berbente**, “*An iterative procedure to solve a class of algebraic Riccati equation*” – Buletinul Științific al U.P.B.serie A, Vol. 61 An 1999, Nr. 3-4, pag. 387-397.(ISI)
2. C.Berbente, S. Mitran, D. Moroianu, **S. Berbente**, „Models of Fluctuation Distribution for the Euler Equations”, – UPB, Scientific Bulletin, serie D: Mech.Eng., vol 62, No 2, 2000, p. 53-67.
3. A. Stoica, **S. Berbente**, E. Oprea., “*The  $H^\infty$  Design of the Automatic Flight Control Systems*” – Proceedings of the 27<sup>th</sup> Annual Congress of the American Romanian Academy of Arts and Sciences (ARA), Volume II, Oradea 29 May – 2 June 2002, pag. 888-892.
- 4.A. Stoica, **S. Berbente**, “*Optimal Flight Control System for the Lateral Motion of a Fighter Aircraft*”, A. Condurache. Revue Roumaine des sciences techniques, Mecanique Appliquée, Tome 45, no.3, May-June 2000, pag. 277-294.
5. **S. Berbente**, “A method for the rapid numerical calculation of partial sums of generalized harmonical series with prescribed accuracy” –UPB, Sci Bull seria D, vol 68, No2, 2006, p.33-40
- 6.Irina Carmen ANDREI, Corneliu BERBENTE, Endre KORODY, László SIKOLYA, **Sorin BERBENTE**, “Special topics on performance enhancement customized for axial compressors, issued from design and flow computation (Special topics on map meshing customized for turbomachinery as jet engine parts, titlul din program)”, The 6th International Conference on Mathematical Problems in Engineering and Aerospace Sciences ICNPAA – 2006, Budapest, June 21-23, 2006, organized by The Budapest University of Technology and Economics, Budapest, Hungary, 2006.
7. I.C..Andrei, **S. Berbente**, “Considerații privind introducerea unui nou criteriu pentru evaluarea domeniului de stabilitate a regimului de funcționare a rețelilor de compresor axial”, Proceedings of the 31-th ARA Congress, Brașov, 31 iul.- 5 aug.2007, pg.29-32, Presses Internationales Polytechniques, ISBN 978-2-553-01412-3.
8. Irina Carmen ANDREI, Corneliu BERBENTE, Nicoleta Mihaela Ene, **Sorin BERBENTE**, *A Survey of the Construction of Axial Compressors and Fans with Swept Blades Purposed for Jet Engines*, The 32and International Conference of the Military Technical Academy “MODERN TECHNOLOGIES IN THE XXIst CENTURY”, Bucharest, November 1-2, 2007, Proceedeings of the Symposium available on CD-ROM version, ISBN 978-973-640-127-5.
9. C.Berbente, **S.Berbente**, “Contribuții românești la aerodinamica evoluției atmosferice a rachetei în mișcare supersonică”, Volumul Simpozionului Internațional: “De la pionierii sibieni ai rachetelor, la tehnica modernă în domeniu”- Sibiu-Capitală culturală europeană, 17-18 mai 2007,pag.199-217

10. Irina Carmen ANDREI, Corneliu BERBENTE, **Sorin BERBENTE**, Nicoleta Mihaela Ene, “*A new optimization method for radial design of blades, applied to axial flow compressor cascades*” *The XXXVIII-th INTERNATIONAL SCIENTIFIC SYMPOSIUM “MILITARY EQUIPMENT AND TECHNOLOGIES RESEARCH AGENCY, with the topic: „The scientific research contribution for attaining the interoperability between equipments and military systems”*, BUCHAREST, May 29, 2008, ISBN:978-973-0-05684-6
11. Corneliu BERBENTE, Irina Carmen ANDREI, Nicoleta Mihaela ENE, **Sorin BERBENTE**, „An Original Method for Optimizing the Parameters of Axial Flow Compressor Blade Cascades in Purpose of Running within the Stability Domain, by Using the Universal Map of Cascades and Correlations with Zweifel Number”, *The 38<sup>th</sup> Int. Scientific Symposium of the Military Equipment and Technology Research Agency METRA*, May 29, 2008, Bucharest, Procs. Symposium CD-ROM, ISBN-978-973-0-05684-6, 2008.
12. IRINA CARMEN ANDREI, C. BERBENTE, **S. BERBENTE**, **Computation of flow through transonic axial compressor cascade, for the blade with non-linear load and non-linear tangent velocity radial design, by using the active disk theory**, the 6<sup>th</sup> IASME / WSEAS International Conference on FLUID MECHANICS and AERODYNAMICS (FMA'08), SESSION: Advanced Aerodynamics and Special Topics on Fluids, **paper ID #: 595-637**, Rhodes (Rodos) Island, Greece, August 20-22, 2008. (ISI Proceedings)
13. C. BERBENTE, **S. BERBENTE**, “**A Method to Automatically Adapt the Step Size for Numerical Solving of Ordinary Differential Equations**”, RECENT ADVANCES in MATHEMATICAL and COMPUTATIONAL METHODS in SCIENCE and ENGINEERING, Mathematics and Computers in Sciences and Engineering. A series of Reference Books and Textbooks, Proceedings of the 10<sup>th</sup> WSEAS International Conference on MATHEMATICAL METHODS in SCIENCE and ENGINEERING, (MACMESE'08), Bucharest, Romania, Nov. 7-9, 2008, Part II, p.421-424, ISSN:1790-2769; ISBN:978-960-474-019-2 (ISI Proceedings)
14. **S. BERBENTE**, „Un model dinamic import-export”, PROCEEDINGS OF THE 33-TH ARA CONGRESS, SIBIU, 2-7 IUN. 2009, VOL.I, pag.189-192, POLYT. INTERNAT. PRESS, MONTREAL, QUEBEC, 2009
15. C. Berbente, **S. Berbente**, “An Extension of Hugoniot – Rankine Relations for Reacting and Nonreacting Flow Considering the Variation of Specific Heats with Temperature”, The 32<sup>nd</sup> “CAIUS IACOB” Conference on Fluid Mechanics and its Technical Applications”, Bucharest, 16-17 Oct. 2009
16. Corneliu, BERBENTE, **Sorin BERBENTE** “OBLIQUE SHOCK WAVES IN 2D SUPERSONIC FLOW CONSIDERING VARIABLE SPECIFIC HEATS WITH TEMPERATURE”, Proceedings of the 34-th ARA Congress, BUCHAREST, 18-23 May, 2010, pg.444-446, Polytechnic International Press, Montreal, Quebec, 2010; ISBN 978-2-553-01547-2
17. **Sorin BERBENTE**, “UN MODEL DINAMIC DISCRET PENTRU EVALUAREA PIETEI”, Proceedings of the 34-th ARA Congress, BUCHAREST, 18-23 May, 2010, pg.181-183, Polytechnic International Press, Montreal, Quebec, 2010; ISBN 978-2-553-01547-2
18. C. BERBENTE, S. DĂNĂILĂ, **S. BERBENTE**, “AN IMPROVED ANALYTICAL SOLUTION FOR 2D INVISCID INCOMPRESSIBLE FLOW THROUGH A CHANNEL WITH WALL FLUID INJECTION AND WALL REGRESSION”, Proceedings of the International Conference of Aerospace Sciences “AEROSPATIAL 2010”, Bucharest, 20-21 October, 2010, p.19-26, ISSN 2067- 8614
19. C.Berbente, S.Dănăilă, **S.Berbente**, “ANALYTIC SOLUTIONS FOR AXISYMMETRIC INCOMPRESSIBLE FLOWS WITH WALL INJECTION AND REGRESSION”, Proceedings of The Romanian Academy, serie A, nr.3, 2011, p.221-229, (ISI)
20. Corneliu BERBENTE, **Sorin BERBENTE** “ SUPERSONIC REACTING FLOW AROUND A WEDGE CONSIDERING VARIABLE SPECIFIC HEATS WITH TEMPERATURE”, Proceedings of the 35-th ARA Congress, Timișoara, 6-10 July, 2011, pg. 159- 162 , Polytechnic International Press, Montreal, Quebec, 2011; ISBN 978-2-553-01596-0

21. Corneliu BERBENTE, **Sorin BERBENTE** "THE SUPERSONIC COMBUSTION RAMJET-PERFORMANCES AND WAYS TO REDUCE ENERGY CONSUMPTION", Proceedings of the International Conference "Days of the Academy of Technical Sciences from Romania, Edition VI, Timișoara, 22-23 sept. 2011, p.71-76, ISSN 2066-6586 (on CD)
22. Corneliu.Berbente, Sterian Dănilă, Sorin Berbente, "Analytical solutions for the temperature field in a 2D incompressible inviscid field in a channel with walls of solid fuel", INCAS BULLETIN, vol.3, Issue 4, october-december 2011, p.25-34 (ISSN 2066-8201)
23. Corneliu BERBENTE, **Sorin BERBENTE**, Marius BREBENEL,"A detailed laminar flow field within the normal shock wave considering variable specific heats, viscosity and Prandtl numbers". International Conference of Aerospace Sciences "AEROSPATIAL 2012", Bucharest, 11-12 October 2012; INCAS BULLETIN, vol.5, Issue 1, Jan.-March 2013, p.37-44, (ISSN 2066-8201)
24. Corneliu BERBENTE, **Sorin BERBENTE**, "USING THE ENTROPY PRODUCTION TO EVALUATE THE COMBUSTION EFFICIENCY OF A GAS MIXTURE" Proceedings of the VII-th Edition of the International Conference THE ACADEMYC DAYS of the Academy of Technical Sciences in Romania, Bucarest, 11-12 oct. 2012, p.315-322, (ISSN 2066-6586)
25. C. Berbente , **S. Berbente** "Some consequences of the specific heats variation with temperature for ideal gases", MATHEMATICS IN ENGINEERING, SCIENCE AND AEROSPACE MESA - www.journalmesa.com, Vol. 4, No. 3, pp. 273-280, 2013, CSP - Cambridge, UK; I&S - Florida, USA, 2013
26. **Berbente Sorin**, Berbente Corneliu, „Considerații privind componentele: matematică, tehnică și management ale educației ingineresti”, PROCEEDINGS ASTR, A 8-a ediție a Conferinței „Zilele Academiei de Științe Tehnice din România”, Brașov, 4-5 oct. 201, pag. 461-468.
27. Corneliu BERBENTE , **Sorin BERBENTE** , "Analytical solutions for some problems of optimum with applications in air traffic and economics", INCAS BULLETIN, Vol.6, Issue1, 2014, pag.15-24.
28. **Sorin Berbente**, Corneliu Berbente, „Oscillations of large amplitude of a rigid sphere in a viscous fluid ” ,PROCEEDINGS – Ediția IX a Conferinței „Zilele Academiei de Științe Tehnice din România”, Sibiu, 6-7 Nov. 2014, p.67- 74
29. **Berbente Sorin**, Crunțeanu Daniel-Eugeniu, Berbente Corneliu „On The Supersonic Combustion of Hydrogen Around a Conical Obstacle Considering Variable Specific Heats with Application To Scramjets”, INT. CONF. on CYBER SYSTEMS IN ALL FIELDS- ICMERA, 29-31 oct. 2015, TRANS. TECHN. PUBLICATIONS, p162-166, Bucharest, Romania.
30. **BERBENTE SORIN**, BERBENTE CORNELIU „A DYNAMIC MODEL FOR DEMAND AND SUPPLY”, Comunicată la Conferința “Zilele Academiei de Științe Tehnice din Romania” , Târgu-Mureș, Oct. 2016
31. Corneliu BERBENTE, Marius Brebenel, **Sorin BERBENTE** , "Aspects on the thermodynamics of early universe", Journal of Engineering Sciences and Innovation, volume 2, Issue 3/2017, AGIR Publishing House, Bucharest, 2017, p.43-53
32. Irina Carmen Andrei, **Sorin Berbente**, Gabriela Stroe, "PROSPECTS AND CHALLENGES FROM TEACHING AND TUTORING NUMERICAL METHODS IN AVIATION TO IN-HOUSE BUILDING AND DEVELOPING FLIGHT SIMULATOR AND 3D VIRTUAL REALITY LABORATORY", The 9th annual International Conference on Education and New Learning Technologies EDULEARN 2017, 3-5 July 2017, Barcelona, Spain -inregistrata nr. ref. ID : 1183 - publicata in EDULEARN17 Proceedings, pp. 841-849, ISBN: 978-84-697-3777-4 / ISSN: 2340-1117

<https://library.iated.org/publications/EDULEARN17>

33. Corneliu BERBENTE, **Sorin BERBENTE**, "Possible Simple Structures of the Universe to Include General Relativity Effects", INCAS BULLETIN, Vol.9, Issue4, October-December 2017, pag.11-20.
34. Nae Cătălin, Stroe Gabriela Liliana, Andrei Irina-Carmen, **Berbente Sorin**, Frunzulică Florin, "ACTIVE CONTROL SYSTEMS WITH APPLICATIONS IN AEROSERVOELASTICITY", Conferință ICNAAM 2017, September 25-30, 2017, Thessaloniki, GREECE, Proceedings Paper, Published 2018; DOI: 10.1063/1.5043972; WOS:000445105400293 (ISI)
35. Nae Cătălin, Stroe Gabriela Liliana, Andrei Irina-Carmen, **Berbente Sorin**, Frunzulică Florin, "COMPUTATIONAL ANALYSIS OF AIRCRAFT CONTROL SYSTEMS", Conferință ICNAAM 2017, September 25-30, 2017, Thessaloniki, GREECE, Proceedings Paper, Published 2018; DOI: 10.1063/1.5043973, WOS:000445105400294 (ISI)
36. Lungu, Mihai, **Berbente Sorin**, "Full-order Multiple Observer with Applications to Airplane Landing", INTERNATIONAL CONFERENCE ON CONTROL, ARTIFICIAL INTELLIGENCE, ROBOTICS & OPTIMIZATION (ICCAIRO), 19-21 Mai 2018, Praga, Cehia, Proceedings Paper, pages: 189-196, DOI: 10.1109/ICCAIRO.2018.00039, ISBN:978-1-5386-9576-0, WOS:000493714800029 (ISI).
37. Catalin Nae, Gabriela Liliana Stroe, Irina Carmen Andrei, **Sorin Berbente**, "Flutter Suppression by Active Control Technology", Conferință ICNAAM 2018, 13-18 Septembrie 2018, Rhodos, GREECE, Publicat 2019, AIP Conference Proceedings, Vol. 2116, Articol nr. 360002, DOI: 10.1063/1.5114362, ISBN:978-0-7354-1854-7, ISSN: 0094-243X, WOS:000521108600349 (ISI)
38. Catalin Nae, Gabriela Liliana Stroe, Irina Carmen Andrei, **Sorin Berbente**, "Dynamic Systems Modelling and Numerical Simulations for Optimal Control", Conferință ICNAAM 2018, 13-18 Septembrie 2018, Rhodos, GREECE, Publicat 2019, AIP Conference Proceedings, Vol. 2116, Articol nr. 360003, DOI: 10.1063/1.5114363, ISBN:978-0-7354-1854-7, ISSN: 0094-243X, WOS:000521108600350 (ISI)
39. Corneliu BERBENTE, Marius Brebenel, **Sorin BERBENTE**, "Aspects on the thermodynamics of early universe", Journal of Engineering Sciences and Inovation, Volume 2, Issue 3/ 2017 pp.43-53, ISSN 2537-320X, ISSN-L 2537-320X, AGIR Publishing House.
40. Corneliu BERBENTE, Marius Brebenel, **Sorin BERBENTE**, "Non-explosive reversible transformations matter-energy via gravity in universe", Journal of Engineering Sciences and Inovation, Volume 3, Issue 3/ 2018 pp.207-214, ISSN 2601-6699, ISSN-L 2537-320X, AGIR Publishing House.
41. Catalin Nae, Irina Carmen Andrei, Gabriela Liliana Stroe, **Sorin Berbente**, "Mathematical Modeling and Numerical Simulations for Performance Prediction in Case of a Liquid Propelled Rocket Engine", Conferință ICNAAM 2019, 23-28 Septembrie 2019, Rhodos, GREECE, Publicat 2020, AIP Conference Proceedings, Vol. 2293, Articol nr. 320004, DOI: 10.1063/5.0031146, ISBN:978-0-7354-4025-8, ISSN: 0094-243X, WOS:000636709500476 (ISI)
42. Catalin Nae, Irina Carmen Andrei, Gabriela Liliana Stroe, **Sorin Berbente**, "Mathematical Modeling and Numerical Simulations for Performance Prediction in Case of the Turbojet Engine", Conferință ICNAAM 2019, 23-28 Septembrie 2019, Rhodos, GREECE, Publicat 2020, AIP Conference Proceedings, Vol. 2293, Articol nr. 320002, DOI:10.1063/5.0031141, ISBN:978-0-7354-4025-8, ISSN: 0094-243X, WOS:000636709500474 (ISI)
43. Catalin Nae, Irina Carmen Andrei, Gabriela Liliana Stroe, **Sorin Berbente**, "Performance Prediction in Case of the Mixed Flows Turbofan Engine", Conferință ICNAAM 2019, 23-28 Septembrie 2019, Rhodos, GREECE, Publicat 2020, AIP Conference Proceedings, Vol. 2293, Articol nr. 320003, DOI: 10.1063/5.0031145, ISBN:978-0-7354-4025-8, ISSN: 0094-243X, WOS:000636709500475 (ISI)
44. Corneliu Berbente, **Sorin Berbente**, "A possible way of unification of the gravity (Newton) and electric (Coulomb) forces by using a hydro-dynamic analogy", INCAS BULLETIN, Vol.12, Issue 4, Oct.-Dec. 2020, pag.25-32.
45. Corneliu BERBENTE, **Sorin BERBENTE**, "More direct methods to evaluate general relativity effects. The influence of the age of the Universe", INCAS BULLETIN, Volume 14,

Issue 4/ 2022, pp. 29 – 33, (P) ISSN 2066-8201, (E) ISSN 2247-4528, <https://doi.org/10.13111/2066-8201.2022.14.4.3>

46. Irina-Carmen ANDREI, Gabriela-Liliana STROE, Sorin BERBENTE, Vasile PRISACARIU, Emil COSTEA, Ionel POPESCU, Octavian Ioan FILIPESCU, **"RISK MANAGEMENT APPLIED TO AEROSPACE ENGINEERING DESIGN"**, Conferinta AFASES 2023, AFASES 2023 - Scientific Research and Education in the Air Force, May 25th – 27th, 2023, Braşov, Proceedings, pag. 113-128, DOI: 10.19062/2247-3173.2023.24.16.

47. Irina-Carmen ANDREI<sup>1</sup>, Gabriela-Liliana STROE, Sorin BERBENTE, Gina Florica STOICA, Nicoleta CRISAN, Delia PRISECARU, Anca GRECULESCU, Emil COSTEA, Ionel POPESCU, Cristian STOICA, Octavian Ioan FILIPESCU, **"Applications of design and reverse engineering for the development of digital and smart tools for composite additive manufacturing"**, INCAS BULLETIN, Volume 15, Issue 4/ 2023, pp. 19 – 34, (P) ISSN 2066-8201, (E) ISSN 2247-4528, DOI: 10.13111/2066-8201.2023.15.4.2

48. Anton BALABAN, Andrei NEAMTU, Sorin BERBENTE, Gabriela-Liliana STROE, Irina-Beatrice STEFANESCU, Emil COSTEA, Irina-Carmen ANDREI, Ionel POPESCU, **"Considerations regarding the composition of the cockpit view for a modern simulator"**, INCAS BULLETIN, Volume 15, Issue 2/ 2023, pp. 3 – 10, (P) ISSN 2066-8201, (E) ISSN 2247-4528, DOI: 10.13111/2066-8201.2023.15.2.1

49. Anton BALABAN, Sorin BERBENTE, Andrei NEAMTU, Gabriela-Liliana STROE, Emil COSTEA, Irina-Beatrice STEFANESCU, Irina-Carmen ANDREI, Ionel POPESCU, **"Case study of TCAS implementation in modern FMS"**, INCAS BULLETIN, Volume 15, Issue 2/ 2023, pp. 11 – 19, (P) ISSN 2066-8201, (E) ISSN 2247-4528, DOI: 10.13111/2066-8201.2023.15.2.2

50. Corneliu BERBENTE, Sorin BERBENTE, **"A Possible Evolution of Black Holes by Using a Hydrodynamic Analogy"**, INCAS BULLETIN, Volume 15, Issue 1/ 2023, pp. 3 – 8, (P) ISSN 2066-8201, (E) ISSN 2247-4528, DOI: 10.13111/2066-8201.2023.15.1.1

51. Anton BALABAN, Andrei NEAMȚU, Sorin BERBENTE, Gabriela-Liliana STROE, Irina-Beatrice ȘTEFĂNESCU, Emil COSTEA, Irina-Carmen ANDREI, Ionel POPESCU, **"Considerations regarding the composition of the cockpit view for a modern simulator"**, 9th International Workshop on Numerical Modelling in Aerospace Sciences, "NMAS 2023", 10 - 11 May 2023, Bucharest, Romania, ISSN 2360-1809, ISSN-L 2360-1809, Book of Abstracts.

52. Sorin BERBENTE, Andrei NEAMȚU, Anton BALABAN, Gabriela-Liliana STROE, Emil COSTEA, Irina-Beatrice ȘTEFĂNESCU, Irina-Carmen ANDREI, Ionel POPESCU, **"Case study of TCAS implementation in modern FMS"**, 9th International Workshop on Numerical Modelling in Aerospace Sciences, "NMAS 2023", 10 - 11 May 2023, Bucharest, Romania, ISSN 2360-1809, ISSN-L 2360-1809, Book of Abstracts.

53. Sorin BERBENTE, Andrei NEAMȚU, Anton BALABAN, Gabriela-Liliana STROE, Emil COSTEA, Irina-Beatrice ȘTEFĂNESCU, Irina-Carmen ANDREI, Ionel POPESCU, **"Air Traffic Control software implement in RADAR"**, 9th International Workshop on Numerical Modelling in Aerospace Sciences, "NMAS 2023", 10 - 11 May 2023, Bucharest, Romania, ISSN 2360-1809, ISSN-L 2360-1809, Book of Abstracts.

54. Irina-Carmen ANDREI, Gabriela-Liliana STROE, Sorin BERBENTE, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Anca GRECULESCU, Emil COSTEA, Ionel POPESCU, Cristian STOICA, Octavian Ioan FILIPESCU, **"Preparatory Elements for the Development of Digital and Smart Tools: Application #1: Design Engineering of Transonic Axial Compressor Rotor Blading"**, The 40th "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, 19 – 20 October 2023, Bucharest, Romania, ISSN 2067-4414, Book of Abstracts.

55. Irina-Carmen ANDREI, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Anca GRECULESCU, Gabriela-Liliana STROE, Sorin BERBENTE, Emil COSTEA, Ionel POPESCU, Cristian STOICA, Octavian Ioan FILIPESCU, **"Preparatory Elements for the Development of Digital and Smart Tools: Application #2: Design Engineering for Transonic Axial Compressor Rotor Swept Blading"**, The 40th "Caius Iacob" Conference on Fluid Mechanics and its Technical Applications, 19 – 20 October 2023, Bucharest, Romania, ISSN 2067-4414, Book of Abstracts.

56. Irina-Carmen ANDREI, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Anca GRECULESCU, Cristian STOICA, Octavian Ioan FILIPESCU, Emil COSTEA, Gabriela-Liliana STROE, Ionel POPESCU, Sorin BERBENTE, ” *Preparatory Elements for the Development of Digital and Smart Tools: Application #3: Concept Design in Case of Swept Fan Blade and Reverse Engineering for Low Pressure Compressor Rotor Blade*”, The 40th “Caius Iacob” Conference on Fluid Mechanics and its Technical Applications, 19 – 20 October 2023, Bucharest, Romania, ISSN 2067-4414, Book of Abstracts.

57. Axel FOURNIER, Malek GUENNI, Carles MORELL-MORATAL, Nicolae-Emmanuel RAIU, Irina-Carmen ANDREI, Adriana ȘTEFAN, Cristina PELIN, Gina Florica STOICA, Nicoleta CRIȘAN, Delia PRISECARU, Cristian STOICA, Anca GRECULESCU, Emil COSTEA, Gabriela-Liliana STROE, Ionel POPESCU, Sorin BERBENTE, Octavian Ioan FILIPESCU, ”*Preparatory Elements for the Development of Digital and Smart Tools: Application #4: Reverse Engineering Design of a Light Aircraft Wheel Cover*”, The 40th “Caius Iacob” Conference on Fluid Mechanics and its Technical Applications, 19 – 20 October 2023, Bucharest, Romania, ISSN 2067-4414, Book of Abstracts.

58. Andrei NEAMTU, Anton BALABAN, Sorin BERBENTE, Gabriela-Liliana STROE, Emil COSTEA, Irina-Beatrice ȘTEFANESCU, Irina-Carmen ANDREI, Ionel POPESCU, ”*Air Traffic Control software implemented in RADAR*”, INCAS BULLETIN, Volume 15, Issue 2/ 2023, pp. 59 – 65, (P) ISSN 2066-8201, (E) ISSN 2247-4528, DOI: 10.13111/2066-8201.2023.15.2.6, Published: June 2023

59. Andrei NEAMTU, Anton BALABAN, Sorin BERBENTE, Gabriela-Liliana STROE, Emil COSTEA, Irina-Beatrice ȘTEFANESCU, Irina-Carmen ANDREI, Ionel POPESCU, ”*Study on the practical method implementation of the navigation equations in a simulated FMS*”, INCAS BULLETIN, Volume 15, Issue 2/ 2023, pp. 67 – 73, (P) ISSN 2066-8201, (E) ISSN 2247-4528, DOI: 10.13111/2066-8201.2023.15.2.7, Published: June 2023

#### Cărți:

1. C.Berbente, O.Pleter, **S. Berbente** „Numerische Methoden-Theorie und Anwendungen”, Ed. Printech, București, 2000, (ISBN 973-652-239-3),120 pag.
2. C.Berbente, **S.Berbente** „Metode cantitative”,vol.I (elem de algebră, trig, geom analit și analiză mat), ISBN 973-648-188-3, Ed BREN, Buc.2003,164 pag.
3. C.Berbente, **S.Berbente** „Metode cantitative”,vol.II (calc probab, elem de calc numer,programare liniară, metoda drumului critic, matematici financiare), ISBN 973-648-357-6, Ed BREN, Buc.2004, 171 pag.
4. **S. Berbente**, C.Berbente “Probleme de metode cantitative”,Edit.Univ.Româno-Britanice, Buc.2006 , ISBN(10) 973-87669-1-5/(13) 978-973-87669-1-4, 219 pag.
5. C. Berbente, O. Pleter, **S. Berbente** „Numerische Berechnungsverfahren -Theorie und Anwendungen”, ediție revăzută și completată, UPB, 2007, 127 pag.
6. D. E. Crunțeanu, **S. Berbente**, C. Berbente, „Méthodes de Calcul Numérique - Théorie et Applications”,Ed. POLITEHNICA Press, București, 2014, ISBN 978-606-515-573-2
7. Gabriela Stroe, Irina -Carmen Andrei, **Sorin Berbente**, “Automatizarea Sistemelor de Propulsie Aerospațială”, Editura Printech, ISBN 978-606-23-0881-0
8. C. Berbente, D. E. Crunțeanu, **S. Berbente**, „Geometry for Aerospace Engineering”, Ed. POLITEHNICA Press, București, 2019, ISBN 978-606-515-869-2, 111 pag.
9. D. E. Crunțeanu, C. Berbente, **S. Berbente**, „CALCULUS Theory and Applications”, Ed. POLITEHNICA Press, București, 2020, ISBN 978-606-515-933-4, 196 pag.