

## *Lista de lucrări Conf. dr. ing. Gîrbacia Florin Stelian*

### **Teza de doctorat:**

1. **Gîrbacia F.**, Cercetari teoretice și experimentale privind dezvoltarea de interfețe multimodale de realitate virtuală pentru aplicații de proiectare asistată de calculator, Teza de doctorat, Universitatea Transilvania din Brasov, 2007.

### **Brevete de invenție:**

1. Talabă D., **Gîrbacia F.**, Butnaru T., Sișcă S. „Sistem Reconfigurabil de Vizualizare Stereoscopica”, Brevet de Invenție nr. RO125800B1, 2014

### **Cărți**

1. **Gîrbacia F.**, Talabă D. (2012): Tehnologiile realității virtuale:lucrări practice, Editura Universitatea Transilvania din Brasov, ISBN 978-606-19-0071-8.
2. **Gîrbacia F.** (2016): Tehnologii de Realitate Virtuală și Augmentată Aplicate în Inginerie. Note de curs”, Editura Universitatii Transilvania din Brasov, ISBN 978-606-19-0784-7.
3. **Gîrbacia F.** (2016): Computer aided design and graphics programming : lecture notes, Editura Universitatii Transilvania din Brasov, ISBN 978-606-19-0784-7.
4. Radu Alexandru Ionut, **Gîrbacia Florin** (2018): Informatică aplicată. Lucrări practice, Ed. Universității Transilvania din Brasov, ISBN 979-606-19-1095-3.
5. **Gîrbacia Florin** (2019):Tehnologii de realitate virtuală pentru proiectarea asistată de calculator, Editura Universitatii Transilvania din Brasov, ISBN 978-606-19-1123-3
6. Mihai Duguleană, **Florin Gîrbacia**, Laszlo Barothi (2019): Explorarea Automobilului Secolului XXI ,Editura Universitatii Transilvania din Brasov, ISBN 978-606-19-1125-7.
7. **Gîrbacia Florin**, Duguleană Mihai (2019): Virtual and augmented reality in automotive design and maintenance: course notes, Editura Universitatii Transilvania din Brasov, ISBN 978-606-19-1124-0.

### **Capitole în cărți internaționale (Editura Springer):**

1. **Gîrbacia F.**, Voinea GD., Gîrbacia T. (2018): Vibrotactile Patterns for Smartphone Based ADAS Warnings. In: Burnete N., Varga B. (eds) Proceedings of the 4th International Congress of Automotive and Transport Engineering (AMMA 2018). AMMA2018 2018. Proceedings in Automotive Engineering. Pp. 122-127, Springer, Cham.
2. Postelnicu, C.C., Machidon, O.M., **Gîrbacia, F.**, Voinea, G.D. and Duguleana, M., (2016): Effects of playing mobile games while driving. In: Streitz N., Markopoulos P. (eds) International Conference on Distributed, Ambient, and Pervasive Interactions Lecture Notes in Computer Science, vol 9749, pp. 291-301, Springer International Publishing, DOI: 10.1007/978-3-319-39862-4\_27, ISBN: 978-3-319-39861-7.
3. Duguleana, M., **Gîrbacia, F.**, Postelnicu, C., Beraru, A. and Mogan, G., (2015): Aspects Concerning the Calibration Procedure for a Dual Camera Smartphone Based ADAS. In: Streitz N., Markopoulos P. (eds) Distributed, Ambient, and Pervasive Interactions. DAPI 2015. Lecture Notes in Computer Science, vol 9189, pp. 408-417, Springer International Publishing. DOI: 10.1007/978-3-319-20804-6\_37, ISBN: 978-3-319-20803-9.

4. Runde C., **Gîrbacia F.**, Butila E. (2013): Virtual and Augmented Environments for Concurrent Engineering: Concurrent Virtual Engineering. In: Stjepandić J., Rock G., Bil C. (eds) Concurrent Engineering Approaches for Sustainable Product Development in a Multi-Disciplinary Environment, pp. 849-860. Springer, London, DOI: DOI10.1007/978-1-4471-4426-7\_72, ISBN: 978-1-4471-4425-0.
5. Oancea, G., **Gîrbacia, F.** and Nedelcu, A. (2008): Software Module for Data Exchange Between AutoCAD and a Virtual Reality System, In: Talaba D., Amditis A. (eds) Product Engineering, pp. 383-394. Springer Netherlands, DOI: 10.1007/978-1-4020-8200-9\_19, ISBN: 978-1-4020-8199-6.
6. **Gîrbacia, F.**, Pîslă, D., Butnariu, S., Gherman, B., Gîrbacia, T., Plitea, N. (2017): An Evolutionary Computational Algorithm for Trajectory Planning of an Innovative Parallel Robot for Brachytherapy, Chapter in: Corves B., Lovasz EC., Hüsing M., Maniu I., Gruescu C. (eds) New Advances in Mechanisms, Mechanical Transmissions and Robotics. Mechanisms and Machine Science, New Advances in Mechanisms, Mechanical Transmissions and Robotics, Volume 46 of the series Mechanisms and Machine Science pp. 427-435, DOI 10.1007/978-3-319-45450-4\_43, ISBN 978-3-319-45449-8.
7. **Gîrbacia, F.**, Boboc, R., Gherman, B., Gîrbacia, T., Pîslă, D. (2016): Planning of Needle Insertion for Robotic-assisted Prostate Biopsy in Augmented Reality using RGB-D Camera. In: Rodić A., Borangiu T. (eds) Advances in Robot Design and Intelligent Control, No.540, Chapter No: 56, pp. 515-522, Springer International Publishing, DOI:10.1007/978-3-319-49058-8\_56, ISBN: 978-3-319-49057-1.
8. Pîsla, D., Gherman, B., **Gîrbacia, F.**, Vaida, C., Butnariu, S., Gîrbacia, T., Plitea, N. (2015): Optimal Planning of Needle Insertion for Robotic-assisted Prostate Biopsy, In: Borangiu T. (eds) Advances in Robot Design and Intelligent Control, Advances in Intelligent Systems and Computing Volume 371, 2016, pp. 339-346, Springer International Publishing, Cham, DOI: 10.1007/978-3-319-21290-6\_34, ISBN: 978-3-319-21289-0.
9. Duguleana, M., Brodi, R., **Gîrbacia, F.**, Postelnicu, C., Machidon, O., Carrozzino, M.(2016): Time-travelling with mobile augmented reality: A case study on the piazza dei Miracoli, In: Ioannides M. et al. (eds) Digital Heritage. Progress in Cultural Heritage: Documentation, Preservation, and Protection, LNCS vol. 10058, pp. 902-912. Springer International Publishing, Cham, DOI: 10.1007/978-3-319-48496-9\_73, ISBN:978-3-319-48495-2.
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11. Butnaru, T., **Gîrbacia, F.**, Tîrziu, F., Talabă, D. (2005): Mobile robot system controlled through mobile communications. Chapter in: Talabă D., Roche T. (eds) Product Engineering: Eco-Design, Technologies and Green Energy, pp. 433-442. Ed. Springer DOI: 10.1007/1-4020-2933-0\_26, ISBN 978-1-4020-2932-5.
12. Postelnicu CC., **Gîrbacia F.**, Machidon O., Voinea GD. (2018): Long Term Use Effects of a P300-Based Spelling Application. In: Schmorow D., Fidopiastis C. (eds) Augmented Cognition: Intelligent Technologies. AC 2018. Lecture Notes in Computer Science, vol 10915, pp 170-179. Springer, Cham, ISBN 978-3-319-91469-5
13. Boboc R.G., **Gîrbacia F.**, Postelnicu C.C., Gîrbacia T. (2019) Evaluation of Using Mobile Devices for 3D Reconstruction of Cultural Heritage Artifacts. In: Duguleană M., Carrozzino M., Gams M., Tanea I. (eds) VR Technologies in Cultural Heritage. VRTCH 2018. Communications in Computer and Information Science, vol 904, pp 46-59. Springer, Cham, ISBN 978-3-030-05818-0

14. Voinea GD., **Gîrbacia F.**, Postelnicu C.C., Marto A. (2019): Exploring Cultural Heritage Using Augmented Reality Through Google's Project Tango and ARCore. In: Duguleană M., Carrozzino M., Gams M., Tanea I. (eds) VR Technologies in Cultural Heritage. VRTCH 2018. Communications in Computer and Information Science, vol 904, pp 93-106. Springer, Cham, ISBN 978-3-030-05818-0

**Articole in extenso in reviste cotate si in proceedings indexate ISI Thomson Reuters sau SAE:**

1. **Gîrbacia, F.**, Beraru, A., Talabă, D., Mogan, G. (2012): Visual depth perception of 3D CAD models in desktop and immersive virtual environments. *International Journal of Computers, Communications and Control*, 7 (5), pp. 840-848, DOI: 10.15837/ijccc.2012.5.1339 (**Factor de impact: 1.374**)
2. Postelnicu, C.-C., **Gîrbacia, F.**, Talaba, D. (2012): EOG-based visual navigation interface development. *Expert Systems with Applications*, 39 (12), pp. 10857-10866, DOI: 10.1016/j.eswa.2012.03.007 (**Factor de impact: 3.928**)
3. Butnariu, S., Duguleană, M., Brondi, R., **Gîrbacia, F.**, Postelnicu, C. and Carrozzino, M., (2018): An Interactive Haptic System for Experiencing Traditional Archery. *Acta Polytechnica Hungarica*, 15(5), pp 185-208. DOI: 10.12700/APH.15.5.2018.5.11 (**Factor de impact: 0.909**)
4. **Gîrbacia, F.**, Butnariu, S., Orman, A. and Postelnicu, C., (2013): Virtual restoration of deteriorated religious heritage objects using augmented reality technologies. *European Journal of Science and Theology*, 9(2), pp.223-231. **Factor de impact: 0.3**
5. Pantea, A., **Gîrbacia, F.** and Gîrbacia, T. (2016): Development of an Advanced Driver Assistance System Using RGB-D Camera Chapter in: Chiru A., Ispas N. (eds) *International Congress of Automotive and Transport Engineering*, pp. 746-751, Springer International Publishing DOI: 10.1007/978-3-319-45447-4\_82, ISBN: 978-3-319-45446-7
6. Butnaru, Tiberiu; **Gîrbacia, Florin**; Butnaru, Silviu; Beraru Andreea, Talaba Doru (2011): An approach for teaching mechanisms using haptic systems *Proceedings of the International Conference on Virtual learning ICVL 2011* Book Series: *Proceedings of the International Conference on Virtual learning* Pages: 30-36 Published: 2011, ISSN 1844 – 8933
7. Butnariu S., **Gîrbacia F.**, Şupială A. (2014): An approach to teaching Machine Tools using Virtual Reality technologies *Proceedings of the International Conference on Virtual learning 2014*, (pp. 254-258), ISSN 1844 – 8933
8. Butnariu, S., Georgescu, A., **Gîrbacia, F.** (2016): Using a natural user interface to enhance the ability to interact with reconstructed virtual heritage environments *INFORMATICA - JOURNAL OF COMPUTING AND INFORMATICS*, 40 (3), pp. 291-301,
9. Erdelyi, H., Talaba, D., **Gîrbacia, F.** (2009): Virtual prototyping of an automobile steering system using haptic feedback *Proceedings of the 2nd WSEAS International Conference on Sensors and Signals, SENSIG '09, Visualization, Imaging and Simulation, VIS '09, Materials Science, MATERIALS '09*, pp. 21-26.
10. **Gîrbacia, Florin**; Butnariu, Silviu (2012): An innovative approach to teaching mechanism using augmented reality technologies Edited by: Frunzeti, T; Jugureanu, R; Ciolan, L; et al. Conference: 8th International Scientific Conference eLearning and Software for Education Location: Bucharest, ROMANIA Date: APR 26-27, 2012 *LEVERAGING TECHNOLOGY FOR LEARNING, VOL II* Book Series: *eLearning and Software for Education* Pages: 140-143.
11. Butnariu, S., **Gîrbacia, F.** (2012): Development of a natural user interface for intuitive presentations in educational process. In *Conference proceedings of eLearning and Software for Education «(eLSE) (No. 02, pp. 74-79)*. Universitatea Nationala de Aparare Carol I.

12. Gîrbacia, T., **Gîrbacia, F.**, Duguleana, M., Butila, E. (2015): Augmented Reality System for Training Robotic Prostate Biopsy Needle Guidance, Proceedings of the 10th International Conference on Virtual Learning (pp. 254-258), ISSN 1844 – 8933
13. Butnariu, S., **Gîrbacia, F.** (2014):The command of a virtual industrial robot using a dedicated haptic interface Advanced Materials Research, 837, pp. 543-548. Trans Tech Publications.
14. **Gîrbacia, Florin**; Mogan, Gheorghe; Paunescu, Tudor (2012): AR-based Off-Line Programming of the RV-M1 Robot Edited by: Gogu, G; Maniu, I; Lovasz, EC; et al. Conference: 11th International Conference on Mechanisms and Mechanical Transmissions/International Conference on Robotics Location: Clermont Ferrand, FRANCE Date: JUN 06-08, 2012 Book Series: Applied Mechanics and Materials Volume: 162 Pages: 344-351 Published: 2012 DOI: 10.4028/www.scientific.net/AMM.162.344
15. **Gîrbacia, F.**, Duguleana, M., & Stavar, A. (2012):Off-line programming of industrial robots using co-located environments. In Advanced Materials Research (Vol. 463, pp. 1654-1657). Trans Tech Publications.
16. **Florin, Gîrbacia**; Tiberiu, Butnaru; Cristian, Postelnicu; Talaba, D.,(2011) Methods for mobile robots path planning based on co-located environment Book Group Author(s): ASME PROCEEDINGS OF THE 2011 3RD INTERNATIONAL CONFERENCE ON FUTURE COMPUTER AND COMMUNICATION (ICFCC 2011, Pages: 139-144, DOI: 10.1115/1.859711.paper22
17. Madalina-Ioana, Toma; **Florin, Gîrbacia**; Csaba, Antonya; Cristian, Postelnicu (2011): Ubiquitous human interaction with a virtual reality interface for robot programming Book Group Author(s): ASME PROCEEDINGS OF THE 2011 3RD INTERNATIONAL CONFERENCE ON FUTURE COMPUTER AND COMMUNICATION (ICFCC 2011) Pages: 145-150 Published: 2011
18. Cristian-Cezar, Postelnicu; **Florin, Gîrbacia**; Mihai, Duguleana; Talaba, D. (2011): Eog-based teleoperation of a mobile robot Book Group Author(s): ASME PROCEEDINGS OF THE 2011 3RD INTERNATIONAL CONFERENCE ON FUTURE COMPUTER AND COMMUNICATION (ICFCC 2011) Pages: 151-156 Published: 2011
19. Adrian, Stavar; Madalina, Dascalu L.; **Gîrbacia, Florin**; Talaba, D. (2011): Walking compensation treadmill based system: device, environment and testing method Book Group Author(s): ASME PROCEEDINGS OF THE 2011 3RD INTERNATIONAL CONFERENCE ON FUTURE COMPUTER AND COMMUNICATION (ICFCC 2011) Pages: 133-138 Published: 2011, ASME
20. Butnariu, S., **Gîrbacia, F.** (2014): High quality 3D restoration of photographed structures using V.R. technologies Applied Mechanics and Materials, 464, pp. 391-398
21. Butnariu, S., **Gîrbacia, F.** (2013): Methodology for the identification of needles trajectories in robotic brachytherapy procedure using VR technology Applied Mechanics and Materials, 332, pp. 503-508. DOI: 10.4028/www.scientific.net/AMM.332.503
22. Butnaru, T., **Gîrbacia, F.** (2009): Collaborative pre-surgery planning in a tele-immersive environment using VR technology IFMBE Proceedings, 26, pp. 9-14. Ed. Springer DOI: 10.1007/978-3-642-04292-8\_3
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24. Butnariu, S., Mogan, G., Antonya, C., & **Gîrbacia, F.** (2016): A new approach to diagnosis and rehabilitation in spine diseases. In Proceedings of the 2016 Virtual Reality International Conference (p. 27). ACM.
25. **Gîrbacia, F.** (2009): An approach to augmented reality technical drawings Proceedings of the 2nd WSEAS International Conference on Sensors and Signals, SENSIG '09, Visualization, Imaging and Simulation, VIS '09, Materials Science, MATERIALS '09, pp. 27-29.

26. Dreucean, M., Sticlaru, C., Hoigne, D., **Gîrbacia, F.** (2009): Engineering aspects of pre-surgery planning using virtual reality Annals of DAAAM and Proceedings of the International DAAAM Symposium, pp. 749-750.

### **Articole publicate în reviste naționale și volumele unor manifestări științifice indexate în BDI recunoscute de comisia CNATDCU:**

1. Toma, M.I., **Gîrbacia, F.** and Antonya, C., (2012): A comparative evaluation of human interaction for design and assembly of 3D CAD models in desktop and immersive environments. International Journal on Interactive Design and Manufacturing, 6(3), pp.179-193. **(Indexată SpringerLink, Scopus)**
2. Butilă, E.V., **Gîrbacia, F.** (2011): Expert system for chose material used gears World Academy of Science, Engineering and Technology, 79, pp. 205-207. **(Indexată Scopus)**
3. Gîrbacia, T., **Gîrbacia, F.**, Mogan, G. (2014): Virtual planning of robot trajectories for spray painting applications Applied Mechanics and Materials, 658, pp. 632-637. DOI: 10.4028/www.scientific.net/AMM.658.632 **(Indexată Scopus)**
4. **Gîrbacia, F.** (2013): Evaluation of CAD model manipulation in desktop and multimodal immersive interface Applied Mechanics and Materials, 327, pp. 289-293. DOI: 10.4028/www.scientific.net/AMM.325-326.289 **(Indexată Scopus)**
5. **Gîrbacia, F.** (2012): Evaluation of cognitive effort in the perception of engineering drawings as 3D models ACHI 2012 - 5th International Conference on Advances in Computer-Human Interactions, pp. 247-250. **(Indexată Scopus)**
6. M., Duguleana, **F. Gîrbacia,** Gh, Mogan. (2015): Using dual camera smartphones as advanced driver assistance systems: Navieyes system architecture 8th ACM International Conference on PErvasive Technologies Related to Assistive Environments, PETRA 2015 - Proceedings, art. no. a23. **(Indexată Scopus, ACM)**
7. **Gîrbacia, F.**, Gîrbacia, T. and Butnariu, S.,(2015): DESIGN REVIEW OF CAD MODELS USING A NUI LEAP MOTION SENSOR. Journal of Industrial Design & Engineering Graphics, 10, 2015 **(Indexata EBSCO – Publishing)**
8. **Gîrbacia, F.**, Butnariu, S., Voinea, D., Tolea, B., Gîrbacia, T. and Pîsla, D.(2015): A Virtual Reality System for Pre-Planning of Robotic-Assisted Prostate Biopsy. Applied Mechanics and Materials, 772, p.585.**(Indexată Proquest)**
9. Boboc, R. G., **Gîrbacia, F.**, Duguleană, M., & Tavčar, A. (2017). A handheld Augmented Reality to revive a demolished Reformed Church from Braşov. In Proceedings of the Virtual Reality International Conference-Laval Virtual 2017 (p. 18). **(Indexată ACM, Scopus)**
10. Gîrbacia, T., **Gîrbacia, F.**, Butnariu, S. Gherman, B., Vaida, C., Pîslă, D. (2016):Development of a virtual reality application for planning of robotic prostate transperineal biopsy. In Bulletin of the Transilvania University of Brasov, Vol. 9 (58), Series I, no.2, special issue - 2016, pag. 133-139, ISSN 2065-2119.**(Indexată EBSCO)**
11. **Gîrbacia, F.**, Dumitru, A., Postelnicu, C., Duguleana, M., Gîrbacia, T., Butila, E., Beraru A. & Mogan, G. (2016): Effects of ADAS notifications on driver's visual attention under simulator driving conditions. Abstract. In PERCEPTION (Vol. 45, pp. 307-308). 1 Olivers Yard, 55 City Road, London Ec1y 1sp, England: Sage Publications Ltd.ISSN: 0301-0066 **(Indexată ISI)**
12. **Gîrbacia, F.**; Beraru, A.; Talaba, D.(2012): The influence of shape complexity in visual depth perception of CAD models, Abstract. PERCEPTION Volume: 41 Supplement: S Pages: 81-82. **(Indexată ISI)**
13. **Gîrbacia, F.** (2010): An approach to an augmented reality interface for computer aided design Annals of DAAAM and Proceedings of the International DAAAM Symposium, pp. 791-792. **(Indexată Scopus)**

## Alte lucrări și contribuții științifice:

1. Runde, C., Decker F., Talabă, D., **Gîrbacia F.**(2006): A multi server multi user approach for distributed virtual environments, Workshop on Virtual Reality in Product Engineering and Robotics: Technology and Applications, Special issue of Bulletin of the Transilvania University of Brasov, Brasov, pp. 11- 18, ISSN 1221-5872.
2. Talabă, D.,Mogan, Gh., Antonya, Cs., **Gîrbacia F.**, Butnaru T.,Sisca, S., Aron, C. (2006): Virtual Reality in Product Design and Robotics, Workshop on Virtual Reality in Product Engineering and Robotics: Technology and Applications, Special issue of Bulletin of the Transilvania University of Brasov,Brasov, pp. 45- 50, 2006. ISSN 1221-5872.
3. Razvan Gabriel Boboc, **Florin Gîrbacia**, Aleš Tavcar, Eugen Butila (2016): Reviving the memory of demolished buildings using Augmented Reality. Information Society 2016 eHeritage Workshop – Ljubljana (Slovenia), October 10-14 2016, In proceedings of the 19th international multi-conference Information Society, pp. 5-8.
4. **Gîrbacia, F.**; Duguleana, M.; Postelnicu, C.; Girbacia, T.; Voinea, D.(2016): A Mobile Application For Discovering Brasov Monuments Using Augmented Reality. In proceedings of the 2016 International Conference on Augmented Reality for Technical Entrepreneurs, ARTE 2016 – Bucarest (Romania), April, 1 2016 pp. 23-26.
5. Postelnicu, C., Duguleana, M., **Gîrbacia, F.**, & Talaba, D. (2014): Towards P300 based brain computer interface for Computer Aided Design. In Conference and Exhibition of the European Association of Virtual and Augmented Reality, EuroVR (pp. 107-111).
6. **Gîrbacia, Florin**, and Teodora Gîrbacia, (2014): Tehnologii de interfațare naturală aplicate în proiectarea asistată de calculator. Proceedings of the Romanian National Human-Computer Interaction Conference - RoCHI 2014, pp.25-28, <http://rochi.utcluj.ro/articole/2/RoCHI-2014-Girbacia.pdf>
7. Mogan, G., Talaba, D., **Gîrbacia, F.**, Butnaru, T., Sisca, S. and Aron, C.(2008): A generic multimodal interface for design and manufacturing applications. In Proceedings of the 2nd International Workshop Virtual Manufacturing (VirMan08)-Part of the 5th INTUITION International Conference: Virtual Reality in Industry and Society: From Research to Application (pp. 6-8).
8. **Gîrbacia, F.**, Runde, C., Butnaru, T., Sisca, S. and Talaba, D.(2006): An interactive multi wall projected virtual environment for virtual reality based design and manufacturing simulation. In 12th International Conference on Machine Design and Production, Kusadasi, Turkey.
9. **Gîrbacia, F.**, BUTNARU, T. and Erdélyi, H.,(2009) An approach for the integration of 3D CAD models into augmented reality environments. In Proceedings of International Conference on Engineering Graphics and Design (pp. 12-13).
10. Butnariu, S., **Gîrbacia, F.**, & Orman, A. (2012): Methodology for 3D reconstruction of objects for teaching virtual restoration. On Virtual Learning, 46.
11. Staretu, I., Dudulean, C., & **Gîrbacia, F.** (2009): Interface for manipulation of the 3D virtual objects in the training activities to disciplines of applied mechanics. In The International Conference Interdisciplinarity in Engineering INTER-ENG (p. 300). Editura Universitatii " Petru Maior" din Tirgu Mures.
12. Staretu, I., Dudulean, C., & Girbacia, F. (2009): Pilot station for training process specific to disciplines of applied mechanics using virtual reality, The 3rd International Conference on "Computational Mechanics and Virtual Engineering" COMEC 2009
13. Dascălu, M., **Gîrbacia, F.S.**, Talabă, D. and Stavăr, A., 2008: COGNITIVE APPROACH OF HUMAN-MACHINE COMMUNICATION. Bulletin of the Transilvania University of Brasov, Series I: Engineering Sciences, 1(50).

14. Duguleana, M., **Gîrbacia, F.**, Postelnicu, C., Brodi, R., & Carrozzino, M. (2016): Exploring Pisa Monuments Using Mobile Augmented Reality. World Academy of Science, Engineering and Technology, International Journal of Computer, Electrical, Automation, Control and Information Engineering, 10(11), 1885-1888.
15. Gîrbacia, F., Butnaru, T., Beraru, A., Butila, E. and Mogan, G., (2011): A Framework for Tele-Immersive Design Review of 3D CAD Models. In 3rd WSEAS International Conference on Manufacturing Engineering, Quality and Production Systems (MEQAPS'11), Braşov.

### Proiecte de cercetare:

1. ROSA- CDI-STAR-, BrainSpace - Interactiune multimodala cu masini pentru aplicatii spatiale bazate pe utilizarea biopotentialelor omului, Contract numărul: 566 /2017, National, Perioada: 2017-2019; Valoare: 600000 RON; Finantator: ROSA; *Funcția în proiect: Responsabil dezvoltare software si hardware.*
2. PN-II-PT-PCCA-2013-4-0647 - ROBOCORE - Biopsia prostatei asistata robotic, o metoda inovativa de mare precizie, Contract numărul: 247/2014, National, PCCA TIP 2, Perioada: 2014-2017; Valoare: 150000 RON; finantator: UEFISCDI; *Funcția în proiect: Responsabil partener Universitatea Transilvania din Brasov*
3. Proiect CDS Dynamic Tribology, Contract cu Schaeffler, nr. 4029/26.03.2008, Act adit.6 13494/19.10.2016, International, finantator: Schaeffler Technologies AG & Co. KG, 2016-2017, Valoare: 24800 EUR; *Funcția în proiect: Director proiect.*
4. Proiect CDS Dynamic Tribology, Contract cu Schaeffler, nr. 4029/26.03.2008, Act adit. 5 Nr:1291/04.02.2015, International, finantator: Schaeffler Technologies AG & Co. KG, Perioada: 2014-2016, Valoare: 34069.77 EUR;
5. *Funcția în proiect: Scientific manager.*
6. H2020-TWINN-2015 - eHeritage - Expanding the Research and Innovation Capacity in Cultural Heritage Virtual Reality Applications, finantator: Comisia Europeana Horizon 2020 – Twinning, perioada 2015-2018; Valoare: 420000 EURO; *Funcția în proiect: Membru în echipă.*
7. Premiere H2020; Valoare Grant National:189483 lei, Perioada: 2016-2018; finantator: UEFISCDI; *Funcția în proiect: Membru în echipă.*
8. FP6-VEGA -Virtual Reality in Product Design and Robotics, perioada:2005-2008 finantator: Comisia Europeana, Nr Contract: FP6 - SSA Project AC, 16565, Valoare: 900000 EURO; *Funcția în proiect: Membru în echipă.*
9. SPINE - Sistem de diagnosticare și terapie a afecțiunilor coloanei vertebrale, perioada: 2014-2017 Parteneriate 2013, finantator: UEFISCDI Cod proiect: PN-II-PT-PCCA-2013-4-1596 – Nr contractului: 227/2014 (coordonator UTBv); Valoare: 590.504 lei; *Funcția în proiect: Membru în echipă.*
10. NaviEyes - Intelligent Driver Assistant for Smartphones perioada: 2014-2017 finantator: UEFISCDI Nr. Contract:240 din 01/07/2014 (PN-II-PT-PCCA-2013-4-2023) Parteneriate 2013; Valoare: 894250 lei; *Funcția în proiect: Membru în echipă*
11. Chance - Brahiterapia asistată robotic, o abordare inovativă în terapia cancerelor inoperabile, perioada:2012-2016 finantator: PCCA Tip 2, UEFISCDI, Nr. Contract:173/2012; Valoare: 300000 lei; *Funcția în proiect: Membru în echipă.*
12. EXORAS - Nou sistem haptic de tip exoschelet pentru robotică și automată spațială – Nr. 13/2012 (coordonator UT Cluj) Cercetare - Agentia Spatiala Romana (ROSA) 2012, perioada 2012 - 2015; Valoare: 174500 lei; *Funcția în proiect: Membru în echipă.*
13. IREAL - Interfață cu retur haptic pentru prototiparea virtuală în mediu imersiv, Nr. Contract: 96/2007; finantator: Bugetul de stat - UEFISCSU; perioada 2007-2010; Valoare: 907068.12 lei; *Funcția în proiect: Membru în echipă.*

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10.04.2019

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