

## **VOICU Gheorghe** **(Ph.D.eng., Professor)**



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**Competences:** processes and equipment for milling and bakery, processes and equipment for sanitation localities, agricultural machinery, conditioning of agricultural products, physical properties of agricultural products, transport systems, equipment for milk processing, packaging systems; biomass processing for energy production

### **Lectures and seminars**

- Processing technology of agricultural products;
- Milling and bakery equipment;
- Dosing and packaging systems;
- General technology in food industry
- Equipment for sanitation localities;
- Engineering of solid waste ecological storage – master;
- Systems for advanced processing of cereals – master;

### **Scientific and professional activity in brief**

- Author of 14 books and university courses;
- Over 115 papers published in national and international journals;
- Over 75 papers published in proceedings of international symposiums and conferences;
- Director or team member in 7 national and international projects;
- Advisor for over 100 licence and master graduation thesis;
- Member in American Society of Agricultural & Biological Engineers (ASABE), USA; Engineering Society of Agricultural Machinery of Romania (SIMAR); Robotics Society of Romania; Association for Multidisciplinary Research on the Western Zone of Romania;
- Member in various committees for promotion of academic staff (CNATDCU for Mechanics and Mechatronics Section; Senate of Politehnica University of Bucharest)

### **Main directions of interest (with exemplification of contribution).**

1. *Harvesting machinery working processes* (eg.: Voicu Gh., Căsandroi T., Toma M.L., *Predictions regarding the influence of the material movement along the sieve on seeds separation in cleaning systems from the cereal combine*, Actual tasks on agricultural engineering, vol.35, 2007, Opatija, Croatia, ISSN 1333-2651, pag.155-166; Voicu Gh., T.Casandroi, G.Ipate, *Studies regarding the influence of the sieve oscillatory plan-parallel motion on the seeds separation in cleaning systems from the cereal combine*, Automobile, Environment and Farm Machinery AMMA-2007, Acta Technica Napocensis, Series: Applied Mathematics and Mechanics, nr.50, vol.V, Cluj-Napoca, pag.443-450, ISSN 1221-5872);
2. *Equipment for sanitation of localities* (eg.: Voicu Gh., *Utilaje pentru gospodărie comunală și ecologizarea localităților*, Editura MatrixRom, 2007, 255 pagini, ISBN 978-973-755-253-2; Voicu Gh., Nicolescu M., *Viewpoints on the construction and work process of the pneumatic impurity separators with air recirculation*, Proceedings of the 5th International Conference "Integrated Systems for Agri-Food Production SIPA'07", 22-24 noiembrie 2007, Sibiu, p.221-224, Ed. Orizonturi Universit., Timisoara, ISBN 978-973-638-348-9).
3. *Equipment for milling and bakery industry* (eg.: Voicu Gh., *Procese și utilaje pentru panificație*, Ed. Bren, Cursuri Universitare (34), Bucharest, 1999, 173 pag. ISBN 973-9427-22-7; Voicu Gh., Ene Gh., Nicolescu M., *Mathematical model for the determination of the necessary drive power of the radial blades mixers*, Modelling and optimization în the machines building field, MOCM-13, vol.3, Romanian Technical Sciences Academy, 2007; Voicu Gh., Tudosie E.M., Paraschiv G., Voicu P., Ipate G., *Testing certain distribution laws regarding some physical characteristics of grinded wheat seed mixture inside milling units and the connection between them*, Actual tasks on agricultural engineering, vol.39, 2011, Opatija, Croatia, ISSN 1333-2651, p.427-436; Voicu Gh., David M.F., Tudosie E.M., Constantin Gh., *Researches on the grindings charactersitics in technological breakage phase at a fluring mill with capacity of 220 t / 24 h*, Modelling and optimization în the machines building field MOCM, Bacau, 2009, 15(3), p.85-90, ISSN 1224-7480).
4. *Dough rheology and physical properties* (1. Voicu Gh., Stefan E.M., Constantin Gh., Voicu P., Casandroi T. - *Shear bioyield stress at penetration with cone of some wheat flour dough*, Proceedings of the 40th International Symposium "Actual tasks on agricultural engineering", februarie 2012, Opatija, Croatia, ISSN 1333-2651, p.431-442; 2. Voicu Gh., Stefan E.M., Constantin Gh., Ipate G., *Variation of farinographic parameters of doughs obtained from wheat and rye flour mixtures during kneading*, Scientific Bulletin of University POLITEHNICA of Bucharest, Series D: Mechanical Engineering, Vol.74(2), 2012, p.307-320, ISSN 1454-2358; 3. Voicu Gh., Constantin Gh., Stefan E.M., *Relevant rheological properties of bread dough in small amplitude oscillatory dynamic tests (saos)*, INMATEH Agricultural Engineering, 35(3)/2011, pag.49-54, ISSN 2068 – 4215); 4. Voicu Gh., Constantin G.A., Stefan E.M., *Comparative granulometric characteristics of grist fractions from plansifter compartments of one and two reduction roll passages in a milling plant of 4.2 t/h*, Progress of Cryogenics & Isotopes Separation, 1(16), 2013, (ISSN 1582-2575), p.51-62).
5. *Biomass processing* (eg.: Voicu Gh., Moiceanu G., Paraschiv G., Voicu P., *Statistical characterization of the compression properties for agricultural biomass used as a source of biomass*, Buletinul Institutului Politehnic din Iași, Tomul LVI (LX), 2010, pag.489–498, ISSN 1011–2855; Voicu Gh., Moiceanu G., Biris S.S., Rusanescu C.O., *Researches regarding Miscanthus stalk behaviour during crushing stress under small loads*, Actual tasks on agricultural engineering, vol. 2011, Opatija, Croatia, ISSN 1333-2651, pag.153-160; Voicu Gh., Moiceanu G., Sandu M., Poenaru I.C., Voicu P., *Experiments regarding mechanical behaviour of the energetic plant miscanthus to crushing and shear stress*, Engineering for Rural Development, vol.10, 2011, Jelgava, Letonia, pagp.490-495 ISSN 1691-3043).