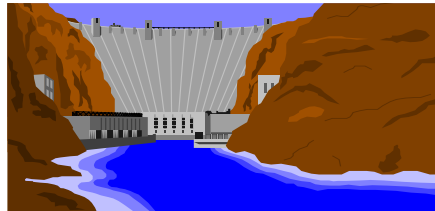


# FACULTY OF HYDROTECHNICAL ENGINEERING



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## RESEARCH CENTER FOR MODELLING, DRAWING AND BEHAVIOUR MONITORING OF THE HYDROTECHNICAL ARRANGEMENTS

### GENERAL PRESENTATION

The center was set up in 2001 and certified by the Romanian Research Authority in Higher Education (CNCSIS certificate no. 99 / CC-C, 11 May 2001).

The main research fields of the center lies generally on water engineering, having as subfields:

- Water constructional works
- Urban sanitation
- Land reclamation arrangement.

Based on the long experience of the researchers and the existing research infrastructure, the center is able to manage engineering projects in fields connected to water engineering.

### MAIN ACTIVITIES

- managing research projects in water engineering
- design and technical assistance in Hydrotechnical structures
- water constructional works
- rivers regulation works
- waterways and harbors
- modern technologies in water engineering
- dinking and industrial water supply network and plants
- waste water treatment plants
- sewage network
- water biology and chemistry
- water quality monitoring
- numerical modeling in surface water and groundwater flow
- numerical modeling of the pollutants transport in groundwater
- land reclamation, irrigations and drainages
- rural sustainable development
- soil science studies and soil erosion
- polluted soils rehabilitation
- surveying, cadastre
- waste disposal sites design and monitoring

### PROJECTS

#### RESEARCH TEAM

Mirel. I., David, I., Sumalan, I., Beilicci, R., Achim, C., Eles, G., Gîrbaciu, A.,

**1. Establishing the sanitary protection zones around wells and drains. Dimensioning the hydrological perimeter zones for water intakes. Case study: Water supply plant Oradea City**

Contract no. 542/ 2006  
Value: 35,000 Euro  
Beneficiary: Water Supply Company, Oradea

#### RESEARCH TEAM

Ion, M., Lazar, Gh., Popa, Gh., Fulop, E., Nicoara, S., Constantin, T.A., Ghitescu A., Busan, A., Garbaciuc, C., Riiosu, J., Maries C., Beilicci, R., Beilicci, E

**1. Design checking of the following works: Restoration of the protection dike on Rasnic Stream in the area of Breasta, Dolj County; Restoration of the regulation works on Teslui Stream in the area of Mischii, Dolj County; Restoration of embankment works on Teslui Stream in the area of Popanzalesti Monastery, Dragotesti village, Dolj County; Rehabilitation of bank protection works and dikes on Jiu River, the Dragutesti – Carbesti sector, Gorj County; Restoration of dike on Terpezita Stream in the area of Gabru, Dolj County**

Contract no. 384/ 2006  
Value: 3,000 RON  
Beneficiary: S.C. GEVIS PROTEAM S.R.L.

**2. Design checking of the following works: Restoration of embankment works on Teslui Stream in the area of Popanzalesti, Dragotesti village, Dolj County, – 21<sup>nd</sup> stage; Water development on Luncoi valley, Hunedoara County; Rehabilitation of bank protection works and dikes on Jiu River, the Dragutesti – Carbesti sector, Gorj County, – II<sup>nd</sup> stage; Recalibration of Govodarva Stream in the area of Cazanesti, Mehedinti County; Strengthening of left bank on Crisul Alb River at Buteni, Arad County**

Contract no. 83/2006  
Value: 3,000 RON  
Beneficiary: S.C. GEVIS PROTEAM S.R.L.

**3. Design checking at quality requirements A7, B5 and D for the work: Canals areas with flood risk, Ghercesti village, Dolj County, Canal C1 Craia Valley, Canal C2 CAP Valley, Canal C3 Draghia Valley, Fezability Study**

Contract no. ---/2006  
Value: 600 RON  
Beneficiary: P.F. STANCU, CONSTANTA

**4. Elaboration of technical documentation for obtaining the running permit in safe conditions of the following dams at Craiova (Dolj County): Hanul Doctorului I and II, Valea Sarpelui I, II and III and Valea Fetii I, II and III**

Contract no. 451/ 2006  
Value: 14,000 RON  
Beneficiary: S.C. PROIECT CRAIOVA

**5. Elaboration of technical expertise documentation for the following dams in Timis County: Hitias, Secas I, II and III, Cosari I and II, Stiuca and Herendesti**

Contract no. 450/May 2006  
Value: 7,000 RON  
Beneficiary: A.N.APELE ROMANE S.A,  
D.A. BANAT

**6. Evaluation report regarding the running safety state of the water catching development with dam on Jiu River at Isalnita, Dolj County**

Contract no. 367/2006  
Value: 16,000 RON  
Beneficiary: A.N.APELE ROMANE S.A,  
D.A. JIU-CRAIOVA

**7. Danube bank strengthening in the area of SPAR Shopping Center site at Orsova, Mehedinti County**

Contract no. 522/2006  
Value: 20,000 RON  
Beneficiary: S.C.MORAVA EXPERT S.R.L.

**8. Water supply of Amarastii de Sus village, Dolj County**

Contract no. 567/2006  
Value: 35,000 RON  
Beneficiary: Municipal Council Amarastii de Sus, Dolj County

**9. Feasibility study: accomplishment of bridge in Birda village (no.1) and accomplishment of bridge in Sangeorge village (no.2), Timis County**

Contract no. 575/.2006  
Value: 9,900 RON  
Beneficiary: Municipal Council Birda

**10. Feasibility study: Wastes management in Birda village, Timis County**

Contract no. 576/19.12.06  
Value: 9,900 RON  
Beneficiary: Municipal Council Birda

**RESEARCH TEAM**

Cretu, GH., Mocanu, F., Badaluta, C., Riti, A., Pepa, A.

**1. The floods management integrated to the water management plan of the Banat catchment area**

Contract no. 718 (CNCSIS), type A, Theme 6  
Value: 19,500 RON  
Beneficiary: Romanian Ministry of Education, National Research Authority (CNCSIS)

**RESEARCH TEAM**

Constantinescu, L., Nemes, I., Wehry, A., Grozav, A.

**1. Environmental balance sheet level 1 and 2 over a field of 26.36 ha located SERE TOMNATIC Lovrin village, Timiş County**

Contract no. 476/2006  
Value: 7,700 RON  
Beneficiary: SC FORADEX SA

**2. The study of soils erodability and the slip phenomena in Cornea village perimeter Caras-Severin county and establishing improvement solutions. The impact over the village**

Contract no. 477/2006  
Value: 1,200 RON  
Beneficiary: Municipal Council Cornea, Caras-Severin County

**RESEARCH TEAM**

Beilicci, E., Beilicci, R.

**1. Drilling well equipage F1 Costeiu, Timis**

Contract no. 580/2006  
Value: 3,500 RON  
Beneficiary: S.C. Tact Impex S.R.L.

**RESEARCH TEAM**

Man T. E., Constantinescu L, Hălbac-Cotoară, R., Iosip C.D., Modra, C., Costescu, I.A.

**1. Complex research models and methods in the Romanian sustainable rural development**

Contract no. 9444/2006 (CNCSIS) Grant, A type  
Value: 50,000 RON  
Beneficiary: Romanian Ministry of Education, National Research Authority (CNCSIS)

**PUBLICATIONS**

**BOOKS**

1. Ion, M., *Finite Elements Method. Theoretical bases, The frame finite element*, Politehnica Publishing House, Timisoara 2006, 132 pages (published in Romanian)
2. Lazar, Gh., *Waterpower Constructions, Numerical Computation*, Politehnica Publishing House, Timisoara 2006, 282 pages (published in Romanian)

**PUBLISHED PAPERS**

1. Sumalan I. David I., *Simplified Method to Calculate the Yield Production of the Fully Penetrated Well in Phreatic Aquifers*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1, 2, ISSN 1224-6042, pp. 3-6
2. Hălbac-Cotoară R., *Studies Regarding Aridity Phenomenon in Timiş County, Romania*,

- Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 7-14
3. Podoleanu C. E., Florescu C., *Establishing Criteria for Choosing Treatment Technologies for Making Drinkable Water*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 15-18
  4. Hălbac-Cotoară R., *Surface Drainage and Drainage Arrangements Evolution in Romania*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 19-26
  5. Titan L. G., Damian A., Barabas K., Gherman V., *Pollution and the Eutrophication Processes from Storage Reservoir*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 27-30
  6. Achim, C., *Considerations for Reducing Runoff on the Small Surface Using Bioretention*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 31-34
  7. Man T. E., Mateoc-Sarb N., Hălbac-Cotoară R., *Rural Development Infrastructure – Decisive Factor for a Sustainable Rural Development*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 35-42
  8. Nemes N., *Recycling – A Pollution Alternative*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 43-46
  9. Eles G., *Appropriate Interface Between Total Stations and PC Applications For Civil Engineering and Cadastre*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No. 1,2, ISSN 1224-6042, pp. 47-50
  10. Wehry A., Costescu I., Modra C., *The In Situ Hydraulic Conductivity Determination Using the Drilling Method, when the Phreatic Level is Under the Drill*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 51-54
  11. Brata S., Jura C., *Optimized Drawing of the Tehnical Networks Working in Closed Circuit*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 55-58
  12. Brata S., Jura C., *Efficient Analytical Methods for Optimized Dimensioning of the Technical Networks for Fluids Distribution*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 59-62
  13. Mirea M., *Research Concerning the Influence of the Prefabricated Foundations Shape and the Modality of Introducing them into the Ground upon their Bearing Capacity using FEM*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 63-66
  14. Mirea M., Mihiu, P., *Tests for Vertical Compression Loadings on Foundation Piles on A Hotel in Timișoara*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 67-70
  15. Herban I. S., *General Considerations Regarding the Methods in Determining Deformation in Constructions*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 71-74
  16. Wehry A., Costescu I.A., *Experimental Determination of Cumulated Infiltration in Soil*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 75-78
  17. Wehry A., Hălbac-Cotoară R., Receanu R., *Consideration about Determination of Jumping-up Size Basins with Drowned Vein, at the Pumping Stations for Surface Drainage*, Scientific Bulletin of the "Politehnica" University of Timisoara, Transactions on Hydrotechnics, Vol. 51(65), 2006, No.1,2, ISSN 1224-6042, pp. 79-84
  18. Rogobete Gh., Beutură D., Țimbota I., Grozav, A., Țimbota O. *Pedological and agrochemical views for the development of grapevine in Recas, Timis county*, Proceedings 41<sup>st</sup> Croatian & 1<sup>st</sup> International Symposium On Agriculture, Feb. 2006, Opatija- Croatia, ISBN 953-6331-39-X, pp. 277-278
  19. Rogobete Gh., Beutură D., Bertici, R, Grozav A., *Land degradation phenomena in the oldest paddy in Rromania-Banloc*, Proceedings 41<sup>st</sup>

- Croatian & 1<sup>st</sup> International Symposium On Agriculture, 2006, Opatija- roatia, ISBN 953-6331-39-X, pp. 275-276
20. Hălbac-Cotoară, R., *Drainage Perspectives in Romania. Theory and Action*, The 5<sup>th</sup> International Symposium “Perspective of III<sup>rd</sup> Millennium Agriculture”, USAMV Cluj Napoca, Oct. 2006, USAMV-CN Bulletin, 63/2006 (-), ISSN 1454-2382
  21. Hălbac-Cotoară, R., *Sustainable Development and Agro tourism in Timiș County. Perspectives*, 5<sup>th</sup> International Symposium “Perspective of III<sup>rd</sup> Millennium Agriculture”, USAMV Cluj Napoca, October 2006, USAMV-CN Bulletin, 63/2006 (-), ISSN 1454-2382
  22. Man, E.T, Halbac-Cotoara, R., Modra, C, Iosip, D.C., *Land reclamation and improvement – infrastructure of the rural area to ensure agricultural productions*, Scientific Papers, Series I, Vol.VIII, University of Agricultural Sciences and Veterinary Medicine of Banat, Timisoara, 2006, ISSN 1453-1410, pp. 203-213
  23. Man, E.T., Halbac-Cotoara, R., Modra, C., Iosip D.C., *Humidity excess zones management for achieving sustainable agricultural productions*, Scientific Papers, Series I, Vol.VIII, University of Agricultural Sciences and Veterinary Medicine of Banat, Timisoara, 2006, , ISSN 1453-1410, pp. 193-203
  24. Orlescu, M., Costescu I.A., *Solutions for risks analysis over the environment and for an ecological management for waste storage, an amount of possibilities for a sustainable development*, Scientific Bulletin of the “Politehnica” University of Timișoara, Romania, Transactions of Mechanics, Tom 51(65), Series 1, 2006, ISSN 1224-6077, pp. 317-321
  25. Mirel, I., Man, T., Popes, D., Barabas, K., *Biomass sources of energy for rural house-keeping*, Scientific Bulletin of the “Politehnica” University of Timișoara, Romania, Transactions on Mechanics, Tom 51(65), Series 2, 2006, ISSN 1224-6077, pp. 347-352
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  27. Mirel, I., *Good quality water- Health spring*, AGIR Revue, No. 2/2006
  28. Rogobete, Gh., Ghețeu, M., Goloșie, M., Grozav, A., *Relation between exploitation mines – radioactivity in the massif Poiana Ruscă*, International Symposium „Factors and pedogenetical in temperat climate”, Vol.5, , A.I. Cuza University Publishing House, Iași, Romania, 2006, ISSN 1582-4616, pp. 73-79
  29. Mirel, I., Man, THE., Popes, D., Barabas, K., *Biomass sources of energy for rural house-keeping*, „Renewable Energy Resources” International Workshop, FP6<sup>th</sup> , Integrated European network for Biomass Co-firing NETBIOCOF, Timisoara, “Politehnica” Publishing House, I.S.B.N. (10) 973-625-326-0, (13) 978-973-625-326-3, pp.135-144

#### CONFERENCE PAPERS

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2. David, I., Achim, C., Girbaci, A., Chebutiu, A., *Methodology to evaluate the performance of the in-situ treatment of groundwater containing high iron concentration*, Hydro Eco 2006 International Multidisciplinary Conference: Conference on Hydrology and Ecology. The groundwater/ecology connection, Karlovy Vary, Czech Republic, Sept, 2006
3. David, I., Sumalan, I., Achim C., *Flood wave analyzing by catastrophe theory*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N. (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 19
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- 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 33
7. Carabet, A., Staniloiu, C., Florescu, C., Girbaci, A., *Ring water supply network behaving in case of floods*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 34
  8. Ion, M., Lazar, Gh., Nicoara, S., V., Girbaci, C., *Feasible approach of the high waters management in the Timis river low basin*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 37
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  16. Podaru, C., A., *The fight against pollution of water*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 56
  17. Pisleaga, M., *The influence of the local characteristics upon the distribution of the pollutants in aquifer - Case study*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 58
  18. Carabet, A., Staniloiu, C., Barabas, K., Podoleanu C., *Utilization of the agricultural fields like biological treatment step for the zoo technical farms*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 59
  19. Mirel, I., Damian, A., *Technical-legislative consideration regarding the qualitative protection of the water resources*, Proceedings 2<sup>nd</sup> International Symposium “Preventing and Fighting Hydrological Disasters”, Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 60
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23. Rogobete, Gh., Nemes, I., Grozav, A., Covaci, C., *Erosion hazard and surface runoff in the agricultural and forest soils from hydrographical basin Barzava, Caras-Severin county*, Proceedings 2<sup>nd</sup> International Symposium "Preventing and Fighting Hydrological Disasters", Timisoara, 2006, I.S.B.N.: (10) 973-638-263-X, (13) 978-973-638—263-5, pp. 66
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- PhD THESIS**
1. Achim, C., *Modeling methods for surface runoff attenuation by artificial infiltration systems on small basin*, PhD supervisor: Prof. Dr.Eng. David, I.
  2. Titan, G., *Computer and simulation models elaboration for ecological rehabilitation of the artificial lakes*, PhD supervisor: Prof. Dr.Eng. David, I.
  3. Staniloiu, T.C., *Contributions to the optimization of the waste water treatment processes at small capacity plants*, PhD supervisor: Prof. Dr.Eng. Jura,C.
  4. Podoleanu, C.,E., *The optimization of the waste waters treatment plants*, PhD supervisor: Prof. Dr.Eng. Jura,C.
  5. Pascovici, I., *The impact of lignite exploitation from Husnicioara-Mehedinţi basin and the ecological reconstruction possibilities of their natural habitat*, PhD supervisor: Prof. Dr.Eng. Rogobete, Gh.
  6. Ciungu, M., *Contributions to the simulation and optimization of the hydrographic basin operation in case of flooding*, PhD supervisor: Prof. Dr.Eng. Cretu, Gh.
  7. Beilicci, E.M.B., *Research regarding the effect of the solid runoff on hydrographic area*, PhD supervisor: Prof. Dr.Eng. Cretu, Gh
  8. Popescu, D., *Contributions to the study of the anaerobe fermentation process for biogas production*, PhD supervisor: Prof. Dr.Eng. Mirel, I
  9. Cormos, D., *Rehabilitation of the river courses in the unfavorable areas*, PhD supervisor: Prof. Dr.Eng. Mirel, I.
  10. Segneanu, E., *The modernization of the waste waters treatment plants*, PhD supervisor: Prof. Dr.Eng. Mirel, I.
  11. Damian, A.E., *Romanian environment legislation reported to the European Union requirements*, PhD supervisor: Prof. Dr.Eng. Mirel, I.
  12. Blaj, A., *The management of waste disposal sites in Hunedoara county*, Blaj, A., *The management of waste disposal sites in*

*Hunedoara county*, PhD supervisor: Prof. Dr.Eng. Mirel, I.

13. Mitrasca, D., *Geothermal waters treatment*, PhD supervisor: Prof. Dr.Eng. Mirel, I.

#### **PhD STUDENTS**

1. Scientific Supervisor: Prof.Dr.Eng. Ioan David:  
*Hydraulics and Fluid Mechanics*

- Pisleaga, M., *The optimization of the retention basins for the sewerage systems*
- Crisan, M., *Environmental Monitoring System*
- Busan, A., *The environmental impact of the hydraulic structures on rivers*
- Chebutiu, A., *Rehabilitation strategies of the industrial estate and their environmental impact*
- Ghitescu, A., *Mesh less methods for hydraulic structures*
- Garbaciuc, A., *The study and modeling of the ground water deferization by in-situ methods*
- Gardan, M., *The study and modeling of the sanitary protection zones in complex hydrogeological conditions*
- David, C., *The impact of the terrestrial ways on the groundwater regime*
- Ieremciuc, M. (first year Phd Student)
- Iliuta, C., (first year Phd Student)

2. Scientific Supervisor: Prof.Dr.Eng. Gheorghe Cretu, *Water Management*

- Riti, A., *Water developments impact upon the ecosystems in mining areas*
- Podaru, C.A., *Water management quality models on a river*
- Mocanu, F., *Ecohydrology modeling of some aquatic systems*
- Nagy, C., *Optimization of the water management system in dry periods*
- Garbaciuc, C., *Contributions to the optimization of integrated water management systems*
- Balla, G., *Researches regarding sediments flow for complex arrangements of the hydrographic basin*
- Balica, S., *Contributions to the optimization of the arrangement schemes by non-structural solutions*
- Talau, M., *Researches regarding the flow rates forecast in dry periods in a arranged hydrographic basin*

- Georgescu, A., *Study of qualitative water management in Barzava river hydrographic basin for a clean water*

- Madar, M., *Researches regarding the renaturation of the water bodies strongly modified*

- Damsescu, A., *Researches regarding navigation on Danube River in extremely hydrological conditions on Bazias-Bechet section*

- Stoica, B.S., *Economic analysis of the Jiu hydrographic basin*

- Badaluta Minda, C., *The study of the flooding occurred by the damages of the defense works*

- Husaru, G., (first year Phd Student)

3. Scientific Supervisor: Prof.Dr.Eng. Teodor Eugen Man, : *Land Reclamation*

- Pasca, M., *Irrigation-drainage interaction and its impact upon Cris River basin*

- Nedelcu, D.R., *Hydro ameliorative works impact on the trans boundary water quality from the hydrographic area of Banat*

- Blenesi, D.A., *Optimal techniques and methods of geoshyntetical materials use in land improvement arrangements*

- Lauer, I., *Economical technologies of maintenance and exploitation of drainage arrangements*

- Campan, G., *Irrigation schemes using the mobile irrigation and sprinkling equipment*

- Suiugan, M., *Using of GIS in the water management from the hydrographic basin of Bihor county*

- Tolnai, S., *Sustainable rural development strategies in Bihor county*

- Popescu, A.F., *The impact of rural development program on sustainable development*

- Pavel, C., *Rehabilitation and modernization solutions of irrigation system Crivina-Vânju Mare*

- Pasca, G.V., *The integrated management of water resources. Case study: Hydrographic basin of Someș river*

- Halbac Cotoara, R., *Efficient drainage systems for humidity excess lands*

- Gabor, A., *The rethechnologization of irrigation system Șagu-Fântânele-Arad*

- Modra, C., *Evaluation and calculus methods of the drought mitigation in western Side of Romania*
  - Iosip, C. D., *Economic reconstruction models and the influence of the financing programs on the sustainable rural development*
  - Tentis, M., *Hazards and risk in the Crisuri's hydrographic basin*
  - Olariu Casauteanu R., *(first year Phd Student)*
  - Receanu, R., *(first year Phd Student)*
4. Scientific Supervisor: Prof.Dr.Eng. Gheorghe Rogobete, : *Land Reclamation*
- Pascovici, I., *The impact of the lignite exploitation from Husnicioara-Mehedinti basin and the ecological reconstruction possibilities of their natural habitat*
  - Ghetu, M., *Solutions for the rehabilitation of the terrain polluted with radioactive substances and heavy metals from Banat*
  - Covaci, C., *The impact of the forest administration from Caraș-Severin County over the forester soils*
  - Grozav, A., *Phenomena of the water and soil pollution-the study of a section from hydrographic basin of the river Bârzava*
  - Beutura, S., *Contribution of the study of regosols and erodosols from Caraș-Severin county*
  - Timbota, O., *Land reclamation and improvement measures of the ecological reconstruction of some acid soils from Timiș County*
  - Nemes, N., *Phenomena of retention and mobility of phosphorus inside the soils waters of the hydrographic basin of Bistra-Caraș-Severin*
  - Tudor, V., *Phenomena of nitrates pollution of soils from the Down Plain of the Bârzava river*
  - Costescu, I., *Integrated management of the quality of soils and surfaces water in the hydrographic basin of Bega river*
  - Stroie L., *Sterile waste stabilization of Banat region*
  - Bertici R., *Banat's soils and their influence on the construction*
  - Liuba C., *Modern methods of soil erosion monitoring from Timiș County*
5. Scientific Supervisor: Prof.Dr.Eng. Mirel, I. : *Sanitary Engineering*
- Sabau, E., *Sewerage systems models*
  - Barabas, K., *Technologies for sludge treatment*
  - Moldovan, Gh., *Contributions on the laws application in the environment protection*
  - Pistru, T., *Human settlements protection and environment legislation*
  - Vargovici, S., *Contributions to the effects of the accidental events on the human psychology*
  - Pantea, E., *The study of the waste water treatment from food industry*
  - Opruta, N., *Contribution to the regional water supply systems optimization*
  - Retezan. R., *The drawing and exploitation optimization of the sanitation systems*
  - Mihart, D., *The effects of the natural reservoirs on the environment quality*
  - Marinescu, R., *Contribution to the water losses reducing in the water supply systems*
  - Sandru, I., *(first year PhD student)*
6. Scientific Supervisor: Prof.Dr.Eng. C. Jura: *Sanitary Engineering*
- Capotescu, V.M.C., *Management of the sewerage system in Timisoara*
  - Paian, S., *Water purification plant for surface water*
7. Scientific Supervisor: Prof.Dr.Eng. A. Wehry: *Land Reclamation*
- Breja R., *Ecological reconstruction and pursuance of bauxite land career*
  - Stoica V. C., *Ecological management solutions for waste products*
  - Panțu, H., *The modernization of Timiș-Bega hydrotechnical system*
  - Rozsa P., *The protection agricultural land reclamation from mining areas of Gorj County*
  - Stoica D. M., *The forecast of water quality evolution in Cibiș river for the middle and lower basin*
  - Merloi L., *The land reclamation and improvement potential, workable solution for Banat*
  - Nuțaș Vancia G., *Land reclamation and improvement evolution and efficiency in Timiș county*
  - Pasztai, Z.A., *Modern technologies for the execution of landfills. Case study: Oradea City*

- Blaj, C., *Mathematic modeling of drainage arrangement efficiency*
  - Coput, F., *Mathematic modeling of irrigation systems*
  - Steolea, P., *Gravitational irrigation for slope lands, as irrigation methods in relation with pressure*
8. Scientific Supervisor: Prof. Dr. Eng. Popa Gh.:  
*Water Structures*
- Matei, F., *Stress and strain state determination in the arch shape dams foundations*
  - Maries, C., *Water flow around a retention structure with low water head*
  - Riiosu, J., *High waters management*
  - Botos, M., *Running behavior study for temporary storage dams in case of turning into permanent ones*
  - Ciobanu, P., *Stress state study in the of abutment pier of the weir dams under tainted gate action depending on the hinge geometry*
  - Jugariu, E., *The monitoring and maintaining the functions of the old water storages in the Banat area*
  - Zaharia, M., *The monitoring of the water flow rate for the Mures river on the Arad section*
  - Orlescu, C., *Water tightening accomplishment an hydrotechnical retention and protection works*
  - Schipor, F., *Waste water treatment plants optimization for small and medium localities*

- Marinescu, L., *The calculus of the buried hydrotechnical constructions*

#### PERSPECTIVES

- updating the European trends in water engineering and applying them to Romanian realities
- ensuring technical assistance for the design groups and companies in order to provide water supply projects for small communities
- a complete inventory of the companies acting in the Romanian west side of the country regarding research demands and in this way to set up new research projects
- enlarging the international cooperation in the field of water engineering researches
- further co-operation between our research center and other research centers from Iasi, Bucharest and Constanta Universities in the field of the groundwater management and its protection against pollution

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*Upstream view of Valea Fetii Dam, with the rail way viaduct*

*Upstream view of Valea Sarpelui Dam*



*General view of Hítias polder spillway*



*Downstream view of spillway and energy dissipater at Cosari Dam*



*Upstream face, with the operating shaft, at Herendesti dam*



*Operating shaft at Stiuca dam*



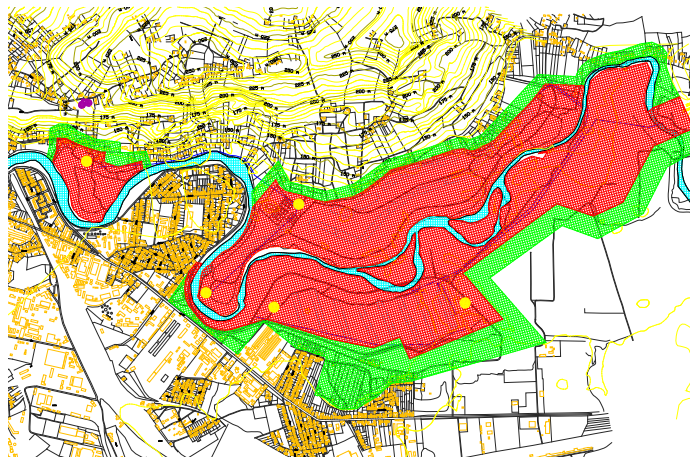
*Upstream view of Isalnita dam on Jiu River*



*Downstream view of Isalnita dam on Jiu River*



*General view of sand removal at Isalnita dam on Jiu River*



*Sanitary protection zones in Oradea water supply system*