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following properties: (i) u is bounded, (ii) u is essentially discontinuous in each point of M, (iii) u is continuous in each point of $R^3 \setminus M$.

The construction of the system is given together with the proofs of all properties mentioned above. In particular, the system with nowhere continuous solution can be constructed.

A NOTE ON THE REGULARITY OF AUTONOMOUS QUASILINEAR ELLIPTIC AND PARABOLIC SYSTEMS

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In this note we obtain as a main result the fact that if all BMO solutions in R^n of the system

$$D_\alpha(A_{ij}^{\alpha\beta}(u)D_\beta u^j)=0$$

are continuous then the system has Liouville property and so it is regular. (The system is said to be regular if its every BMO weak solution on each domain $\Omega \subset R^n$ is locally Hölder continuous.)

We give an example of an autonomous quasilinear elliptic system having equibounded solutions on R^n which are Hölder continuous but their Hölder norms blow up as the solutions tend to a singular solution.

The results are also modified for parabolic systems.