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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  $\mathbb{R}^3 \setminus M$ .

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  $\mathbb{R}^n$  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  $\Omega \subset \mathbb{R}^n$  is locally Hölder continuous.)

We give an example of an autonomous quasilinear elliptic system having equibounded solutions on  $\mathbb{R}^n$  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.