
Fundamental units for orders generated by a unit

Stéphane Louboutin

Let ϵ be an algebraic unit. It is a natural question to ask whether ϵ belongs to some system of fundamental units of the order $\mathbf{Z}[\epsilon]$. We will show that this is indeed the case for some number fields $\mathbf{Q}(\epsilon)$ of small degrees. In our talk, we will restrict ourselves to the case of cubic units, i.e. to the case that $\mathbf{Q}(\epsilon)$ is a cubic number field.