

Málstofa í stærðfræði - Mathematics seminar
Raunvísindastofnun Háskólans, Science Institute, University of Iceland

Fyrirlesari - Speaker: Zbigniew Slodkowski.

Titill - Title: On Hartogs-Bochner phenomenon on complex tori

Tími - Time: **Fimmtudaginn** 6. janúar 2011, klukkan 15:00
Thursday, January 6, 2011, 3 pm

Staður - Place: Stofa 157 í VRII - in room 157 in VRII

Útdráttur – Abstract:

According to the classical theorem of Hartogs, if W is an open domain in $\{\mathbb{C}\}^n$ ($n \geq 2$) and K its compact subset, then every holomorphic function in $W \setminus K$ extends to a holomorphic function in W . This theorem cannot be obtained in dimension $n=1$. A modernized more differential-geometric version of Hartogs result was given by Bochner. If M is a connected \mathbb{C}^∞ smooth hypersurface in $\{\mathbb{C}\}^n$, $n \geq 2$, separating $\{\mathbb{C}\}^n$ into two components, and h is a \mathbb{C}^∞ smooth function on M that satisfies the Cauchy-Riemann equation in complex-tangential directions to M , then h can be smoothly extended to a function holomorphic inside M .

The talk will survey some known results concerning analogous problems in compact complex manifolds, concentrating on the case of compact tori ($n \geq 2$) where complete solution can be provided. This is a report on joint work with A. Bogges and R. Dwilewicz.