Thesis Work MIMO/Beamforming

Master’s Thesis – Beam forming / beam steering algorithms development for advanced wireless communication systems.

Organization – Tieto Sweden Support Services AB
Job area – PDS Radio DU
Number of positions: Two
Location: Karlstad, Sweden

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Background.

Multiple Input and Multiple Output (MIMO) is one of the challenging area in the wireless communication where the new technologies are driving for larger antenna array systems. With the current ongoing research on 5G / New Radio there are high demands for better signal processing algorithms for the Beam forming / Beam steering. Beam forming will create a more focused beam towards the desired user by minimizing the impact to the interference user.

Mission/Problem statement
Thesis work is on algorithm development of Beam forming/ Beam steering. The thesis will involve the activities of

- Exploration of algorithms for the Beam forming
- Implementation of the algorithm(s) in simulation environment
- Analysis of performance of the developed algorithm(s) with different channel conditions

Student profile
Education: Masters in Signal Processing/ Communication systems

Goal/ Target
Exploration and development of algorithms in the area of MIMO BF.

Contact persons

Manager:
Johnny Kristiansson
Phone number: +46705193428
E-mail: Johnny.Kristiansson@tieto.com
Linkedin link to your profile: https://www.linkedin.com/in/johnny-kristiansson-3135b82/

Mentor 1:
Name: Prasad Pechetty
Phone number: +46725477112
E-mail: Prasad.Pechetty@tieto.com
Linkedin link to your profile: https://www.linkedin.com/in/pvndprasad/

Mentor 2:
Name: Vinod Aduru
Phone number: +46724500466
E-mail: Vinod.Aduru@tieto.com
Linkedin link to your profile: https://www.linkedin.com/in/vinod-aduru-400212b/