

## **SOFTWARE & TOOLS USED**

### **Solid modeling/design**

- SolidWorks Premium
- Autodesk Inventor
- Pro/ENGINEER (PTC Creo)
- AutoCAD
- PhotoView 360 - Solidworks
- Showcase - Autodesk Inventor
- Microsoft Visio
- AutoCAD P&ID
- Engineering drawings using GD&T per ASME Y14.5

### **Analysis**

#### **Finite Element Analysis**

- SolidWorks Simulation
- Autodesk A360

#### **Computational Fluid Dynamics**

- Star CD/CCM+ (Current software)
- Fluent (have used in the past)
- CONVERGE (developing expertise)
- Autodesk A360
- Floworks

#### **Magnetic Modeling**

- Maxwell
- FEMM

#### **Dynamic modeling**

- MATLAB/Simulink/SimScape
- SolidWorks Motion Study
- PLECS

#### **Hydraulic Simulation**

- MATLAB/Simulink/SimScape
- HYSAN
- GT-SUITE – Flow Library; Hydraulic
- LMS Imagine.Lab Amesim (developing expertise)

#### **GT Suite – GT-Power (developing expertise)**

#### **Thermodynamic Analysis**

- MATLAB/Simulink/SimScape
- GT-SUITE (developing expertise)
- EES
- Refprop (NIST)

## Embedded systems

### Rapid prototyping of real time controls systems

- Simulink/Stateflow/ Real Time Workshop
- dSPACE
- Woodward/ Mototron/GAP
- National Instruments/LabVIEW
- Custom systems using Freescale MPC family microprocessors and Siemens C series microprocessors

### Programming

- C, C++, C #, Silverlight, Visual Basic, FORTRAN
- MATLAB Coder/Simulink Coder

### Communication protocols

- J1939,J1857,Modbus, XCP,CCP

### Instrumentation and data acquisition systems

- National Instruments/LabVIEW
- Measurement Computing
- Custom designed systems

### SCADA

- Allen Bradley AC800M PLC
- Woodward Micronet and Atlas

## Data processing and presentation

- MATLAB
- JMP
- National Instruments DIAdem
- Excel
- Mathcad
- PowerPoint

## Project and program management

- Microsoft Project
- Asana