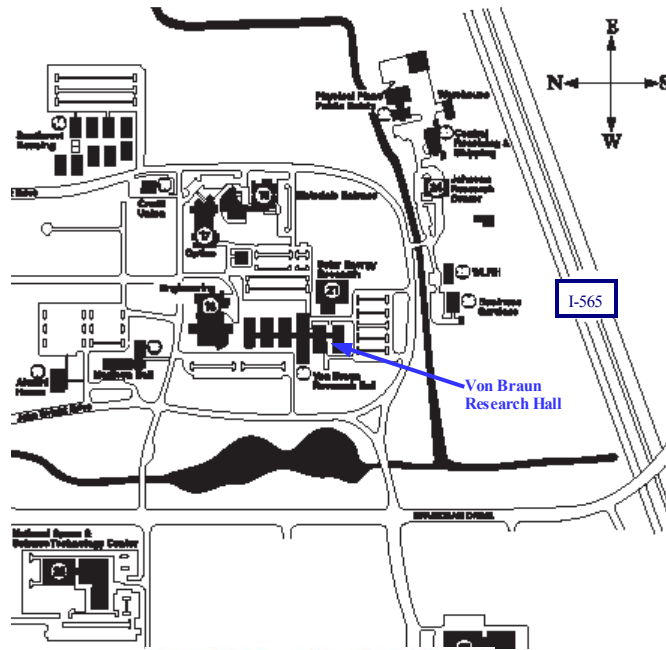




Research Machine Shop

256-824-6398



Von Braun Research Hall
B-8
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256-824-6398

For more information contact:

Dr. Gary Workman
256-824-6578
workmang@email.uah.edu

Sue O'Brien
256-824-6133
obriens@email.uah.edu

or

The Shop Personnel

PERSONNEL

Royal Ritchey is an instrument maker in the UAH Research Machine Shop. With over thirty years of machining experience, Ritchey utilizes imagination and creativity to produce unique parts for specialized applications.

His ability to interface directly with professors and students alike speeds the production process. He has worked with numerous materials including inconel, stainless, titanium, aluminum, plastics, lava, lead, gold and Teflon. Ritchey integrated experiments for the Conquest Rocket project and assisted in final integration.
ritcheyr@email.uah.edu

Christopher Underwood is an instrument maker in the UAH Research Machine Shop. Underwood has thirty years of machining experience in flight hardware, research test instruments, prototyping and assembly. He has worked as a machinist, injection mold maker, instrument maker, welder and mechanical technician with John Blue, Sperry, Machine Craft, United Space Boosters, Unisys, Motorola and Engineered Plastics. He has been with UAH since 1995.
underwc@email.uah.edu

Projects and Capabilities

- Three sounding rocket programs, including hardware design, fabrication and integration
- Fabrication and integration of experiment hardware for Space Shuttle and Space Station
- Laboratory and ground support devices
- Prototypes for UAH affiliated research projects
- Diamond Turning
- Sixty years of combined experience in manufacturing aerospace, defense, medical and commercial hardware
- Certified tool and die makers
- Instrument makers
- Trained in Unigraphics design and manufacturing CAM



Equipment



- Two Lagumatic CNC 250 knee mills: x=23.5 in, y=14 in, z=6 in
- 1654 DCM Victor CNC mill: x=38 in, y=20 in, z=19 in
- Romi 13/5 manual lathe: 13 in. x 40 in.
- Three Bridgeport knee mills
- Two Victor 618 EM toolmaker lathes: 9 in. x 30 in.
- Five drill presses
- DoALL 36 in. vertical band saw
- 30 in break/shear
- Sheet metal hand punch
- 6 in. notcher
- 400 amp TIG welder
- 12 in. Wellsaw horizontal cutoff saw
- 12 in. Lap Master
- KO Lee surface grinder with magnetic table
- Dumore high speed micro drill press
- Abrasive blaster chamber
- Acrylics thermal bender
- Acrylics polisher
- Vacuum forming (maximum 14 in. diameter parts)
- Helicoil insertion machine (max ¼ in. helicoils)
- Chamfer machine
- Allen Bradley Diamond Turning Machine
- Unigraphics CAM and translators

Facility

- 4,800 sq. ft. with 3,800 sq. ft. manufacturing area
- Inspection room
- Tool crib
- 2,500 sq. ft. fenced limited access outside storage yard
- ISO9000 compliant
- Compliant with NASA 5300.4 standard for quality
- Bonded storage area for certified materials with traceability
- Precision tool calibration per MIL-STD-45662A, 150-9002 and Z-540-1
- 5000 pound safe for storage of precious metals



The UAH Machine Shop has the expertise, experience and knowledge to provide you with the best services possible at a reasonable cost.