August 27, 2013

Dear New IIHR Faculty Affiliates,

Welcome to IIHR—Hydroscience & Engineering (IIHR)! We’re pleased you’ve chosen to affiliate with our world-renowned research institute. I believe you will find your work here both rewarding and fascinating.

IIHR’s mission focuses on education, research, and public service in hydraulic engineering and fluids research. Our flagship facility is the historic C. Maxwell Stanley Hydraulics Laboratory (SHL) on the banks of the Iowa River. This iconic structure has spanned almost the entire 90-year history of the institute, and has for many of us come to represent the magnificent foundation upon which the IIHR of today is built. If you are not officed in SHL, I hope you will have an opportunity to spend time here.

At IIHR, our faculty members, students, and research engineers work together to understand one of the world’s greatest resources—water. As a researcher and educator, you will be an integral part of IIHR’s comprehensive multidisciplinary approach to education, which includes basic fluid mechanics (including water, air, and blood), laboratory experimentation, and computational approaches.

You’ll work in close cooperation with students on research projects funded by industry, government, and other organizations. Though IIHR is a relatively small organization, it has long held a major role in the worldwide effort to understand and utilize water and its flow.

A quick note about our name, because so many people ask: originally, IIHR was an acronym for the Iowa Institute of Hydraulic Research. In 2002, our name was officially changed to IIHR—Hydroscience & Engineering to better reflect the broad scope and modern multidisciplinary nature of the institute’s focus. The acronym “IIHR” is retained to reflect a rich history and the past century’s achievements.

At the moment, space is tight in SHL. We are working hard to accommodate our affiliates with workspace in SHL and our other facilities, but it will take a short time to sort things out. Thank you for your patience!

Again, welcome to IIHR! I look forward to getting to know you better as the year progresses. Please do not hesitate to contact me if I can be of help in any way.

Sincerely,

Larry Weber
107-C SHL
Office: 335-5597/Email: larry-weber@uiowa.edu

P.S. The information in this packet can also be found online at www.iihr.uiowa.edu/facilities/support-services/documents.
IIHR Staff

The IIHR staff includes skilled and highly-qualified individuals from a variety of disciplines and areas of expertise:

- Research engineers, drawn from the UI departments of:
  - Civil and environmental engineering
  - Mechanical engineering
  - Biomedical engineering
  - Geoscience
  - Geography
  - Etc.
- Staff who hold full-time appointments with IIHR
- Postdoctoral research associates
- Visiting faculty and researchers
- Research scientists, associates, and assistants concurrently pursuing advanced degrees
- Support staff who provide the following services:
  - Administrative and financial support
  - Assistance with travel arrangements
  - Grant preparation and submission support
  - Research computing support
  - Machining, carpentry, electrical, and model construction support

Because several of IIHR’s research engineers, as well as all the support staff, have full-time commitments with the institute, projects on a tight schedule can be completed in a timely manner.

IIHR is led by its director, who is ultimately responsible for all its endeavors, including staff activities, laboratory facilities, research procedures, reports, and finances. The director also pursues his own research and teaching interests. The IIHR director reports to the dean of the College of Engineering and to the UI vice-president for research, and ultimately to the university president. Research engineers directly supervise the various projects and graduate-student conducted investigations at IIHR.

The responsibilities of IIHR staff are summarized in the organizational chart on the next page; the areas of specialization of IIHR’s senior research staff are listed on the following pages.
IIHR Facilities

- C. Maxwell Stanley Hydraulics Laboratory (SHL) 100 S. Riverside Dr.
- Hydraulics Model Annex (HLMA) 129 Court St.
- Hydraulics East Annex (HLEA) 140 W. Harrison St.
- Hydraulics Wind Tunnel Annex (HWTA) 130 W. Harrison St.
- Hydraulics Oakdale Annex One (HA1) 2310 Old Farmstead Rd., UI Research Park
- Hydraulics Oakdale Annex Two (HA2) 2275 Old Farmstead Rd., UI Research Park
- James Street Laboratory (JSL) 2421 James St. #3, Coralville
- Hydraulics Wave Basin Facility (HWB) Old Farmstead Rd., UI Research Park
- Lucille A. Carver Mississippi Riverside 3388 Highway 22, Muscatine, Iowa
  Environmental Research Station (LACMRERS)

The IIHR laboratories and shops include nine buildings, listed here (a map is also available on page 4, or at [http://www.iihr.uiowa.edu/facilities/annexes-labs-and-shops](http://www.iihr.uiowa.edu/facilities/annexes-labs-and-shops)).
IIHR Research Engineers and Research Scientists/Areas of Specialization

Staff member name, address, phone number, email; area of specialty; degree, school, degree year; title, primary department

Abbreviations:  SHL—Stanley Hydraulics Laboratory
                SC — Seamans Center
                ERF—Engineering Research Facility
                HWTA—Wind Tunnel Annex
                IATL—Iowa Advanced Technologies Laboratory
                JH — Jessup Hall
                SH — Schaeffer Hall
                WP—Water Plant
                TH—Trowbridge Hall

Larry J. Weber, 107C SHL, 335-5597, larry-weber@uiowa.edu
Fish passage facilities, physical modeling, river hydraulics, hydropower, computational hydraulics, and ice mechanics; PhD, University of Iowa, 1993; Professor, civil and environmental engineering, and Director, IIHR

Antonio Arenas, 323-1 SHL, 384-2045, antonio-arenasamado@uiowa.edu
Fish passage design, physically-based watershed simulations, and total dissolved gas modeling; PhD, University of Iowa, 2012; Assistant Research Scientist, IIHR

Allen Bradley, 523A SHL, 335-6117, allen-bradley@uiowa.edu
Hydrology, hydroclimatology, and watershed modeling; PhD, University of Wisconsin-Madison, 1992; Professor, civil and environmental engineering

James Buchholz, 323-D SHL, 335-5224, jhbuchho@engineering.uiowa.edu
Unsteady aerodynamics of biologically-inspired underwater and aerial vehicles, urban microclimate and transport phenomena, and cardiovascular fluid mechanics; PhD, Princeton University, 2006; Assistant Professor, mechanical and industrial engineering

Pablo Carrica, 223D SHL, 335-6381, pablo-carrica@uiowa.edu
Multiphase flow, computational fluid dynamics, and boiling and heat transfer; PhD, Instituto Balseiro (Argentina), 1993; Associate Professor, mechanical and industrial engineering

Alejandro Castro, 107 SHL, alejandro-castro@uiowa.edu
Multiphase flow, computational fluid dynamics, boiling and heat transfer; PhD, University of Iowa, 2011; Assistant Research Scientist, IIHR

Kung-Sik Chan, 241 SH (Schaeffer Hall), 335-2849, kung-sik-chan@uiowa.edu
Time series analysis, chaos, semiparametric statistics, Markov Chain Monte Carlo, stochastic differential equations, stochastic processes, and ecological modeling; PhD, Princeton University, 1986; Professor, statistics and actuarial science
K.B. Chandran, 1138 SC, 335-5640, krishnan-chandran@uiowa.edu
Cardiovascular fluid dynamics; D Sc, Washington University, St. Louis, 1972; Lowell G. Battershell Chair and Professor of Biomedical and Mechanical Engineering, biomedical engineering

George Constantinescu, 323C SHL, 384-0630, sconstan@engineering.uiowa.edu
Computational fluid dynamics, river mechanics, turbulence, and hydraulics; PhD, University of Iowa, 1997; Associate Professor, civil and environmental engineering

David Cwiertny, 4136 SC, 335-1401, david-cwiertny@uiowa.edu
Pollutant fate and transport, and water and watershed treatment; PhD, Johns Hopkins University, 2006; Assistant Professor, civil and environmental engineering

Kajsa Dalrymple, W339 AJB, 335-3360, kajsa-dalrymple@uiowa.edu
Intersections between science, communication, and public policy; PhD, University of Wisconsin-Madison, 2011; Assistant Professor, journalism and mass communication

Caroline Davis, 1 LACMRERS, 563-288-2886, caroline-davis@uiowa.edu
Water quality and biogeophysics; PhD, University of Missouri-Rolla, 2009; Assistant Research Scientist, IIHR

Ibrahim Demir, 314 SHL, 335-5780, ibrahim-demir@uiowa.edu
Environmental information systems, data informatics, scientific visualization, data management, and web-based systems; PhD, University of Georgia, 2010; Adjunct Assistant Professor, civil and environmental engineering, and Assistant Research Engineer, IIHR

Jeff Dorale, 35A TH, 335-0822, jeffrey-dorale@uiowa.edu
Climate dynamics, karst hydrology, paleohydrology, and sea-level change; PhD, University of Minnesota, 2001; Associate Professor, earth and environmental sciences

William Eichinger, 523B SHL, 335-5403, william-eichinger@uiowa.edu
Environmental hydrology and fluid dynamics, surface-atmosphere interactions, atmospheric pollution control and remediation, atmospheric physics, and remote sensing; PhD, University of California-Davis, 1995; Professor, civil and environmental engineering

Tori Forbes, W374 CB, 384-1320, tori-forbes@uiowa.edu
Transport of radioactive and heavy metal contaminants in environmental systems through development of geochemical model compounds, and structural and chemical characterization of environmental media; PhD, University of Notre Dame, 2008; Assistant Professor, chemistry

Lichuan Gui, 223B-5 SHL, 335-5257, lichuan-gui@uiowa.edu
Experimental fluid dynamics (EFD); PhD, University of Essen, Germany, 1997; Adjunct Associate Professor, mechanical and industrial engineering, and Associate Research Scientist, IIHR

Keri Hornbuckle, 4114 SC, 384-0789, kchorn@engineering.uiowa.edu
Cycling of organic contaminants in the Great Lakes, air pollution, and environmental engineering; PhD, University of Minnesota, 1996; Professor and Chair, civil and environmental engineering, and Associate Dean for Academic Programs, College of Engineering
**Dingfei Hu, 4131 SC, 384-0697, dingfei-hu@uiowa.edu**  
Environmental chemistry, environmental fate and transport of contaminants and their metabolites or degradation products, environmental toxicology, phytoremediation, environmental modeling, and risk assessment; PhD, Iowa State University, 2007; Associate Research Scientist, IIHR

**Craig Just, 4111 SC, 335-5051, craig-just@uiowa.edu**  
Interface of environmental analytical chemistry and applied engineering in support of research in phytoremediation of explosives, water quality and cyberinfrastructure, and fate determination of contaminants during wastewater treatment; PhD, University of Iowa, 2001; Assistant Professor, civil and environmental engineering

**Manivannan Kandasamy, 223-2 SHL, 335-6341, mkandasa@engineering.uiowa.edu**  
CFD simulation of free-surface wave-induced separation phenomenon; PhD, University of Iowa, 2005; Assistant Research Scientist, IIHR

**Witold F. Krajewski, 523D SHL, 335-5231, witold-krajewski@uiowa.edu**  
Hydrometeorology, remote sensing, and water resources systems; PhD, Technical University of Warsaw (Poland), 1980; Professor, civil and environmental engineering, and Director, Iowa Flood Center

**Anton Kruger, 523C SHL, 335-6287, anton-kruger@uiowa.edu**  
Development and application of weather-related instrumentation, weather radar, and image processing, and particle image velocimetry; PhD, University of Iowa, 1991; Professor, electrical and computer engineering

**Hans-Joachim Lehmler, S353 CPHB, 335-4211, hans-joachim-lehmler@uiowa.edu**  
Environmental, chemical, and analytical toxicology, chiral environmental pollutants, developmental neurotoxicity, gene-environment interactions, environmental contaminants in the food chain, and environmental contaminants in drinking and surface water; PhD, University of Bonn (Germany), 1995; Associate Professor, occupational and environmental health

**Ching-Long Lin, 2406 SC, 335-5673, ching-long-lin@uiowa.edu**  
Level-set simulation of two-phase flow, free-surface turbulence, lattice-Boltzmann simulation of liquid-gas, liquid-liquid, and fluid-solid interactions for microfluidics, four-dimensional assimilation of atmospheric LiDAR data, and pulmonary flow; PhD, Stanford University, 1994; Professor, mechanical and industrial engineering

**Ricardo Mantilla, 523E SHL, 335-6172, ricardo-mantilla@uiowa.edu**  
Surface hydrology—river networks; PhD, University of Colorado, 2006; Adjunct Assistant Professor, civil and environmental engineering, and Assistant Research Engineer, IIHR

**Juan Ezequiel Martin, 223-3 SHL, 335-6022, juan-martin@uiowa.edu**  
CFD and EFD; PhD, University of Illinois-Urbana-Champaign, 2009; Assistant Research Scientist, IIHR

**Andres Martinez, 4105 SC, 335-6454, andres-martinez@uiowa.edu**  
Environmental contaminant fate and transport modeling, with emphasis in analyzing and simulating the behavior of organic pollutants in urban, remote, and industrial areas; PhD, University of Iowa, 2010; Associate Research Scientist, IIHR
Tim Mattes, 4112 SC, 335-5065, tim-mattes@uiowa.edu
Environmental biotechnology, oxidative biocatalysis, evolution of microbial biodegradation pathways, and application of genomics and proteomics techniques in the study of environmentally relevant microbial communities; PhD, Cornell University, 2004; Associate Professor, civil and environmental engineering

Sayyed Maysam Mousaviraad, 223-23 SHL, 384-0646, maysam-mousaviraad@uiowa.edu
Computational fluid dynamics, experimental fluid dynamics, and ship hydrodynamics; PhD, University of Iowa, 2010; Assistant Research Scientist, IIHR

Marian Muste, 302 SHL, 384-0624, marian-muste@uiowa.edu
Experimental methods in hydraulics and fluid mechanics, sediment transport, environmental fluid mechanics, and engineering education; PhD, University of Iowa, 1995; Adjunct Professor, civil and environmental engineering, and Research Engineer, IIHR

Connie Mutel, 423B SHL, 335-5315, connie-mutel@uiowa.edu
History of IIHR, IIHR archives, Iowa’s ecology/natural history, restoration ecology, and the interactions between landscape alteration, ecosystem services, and human perceptions; MS, University of Colorado-Boulder, 1973; Author, Archivist, and Historian, IIHR

Wilfred A. Nixon, 323-4 SHL, 335-5166, wilfrid-nixon@uiowa.edu
Ice engineering and mechanical properties of materials at low temperatures; PhD, University of Cambridge (England), 1984; Professor, civil and environmental engineering

James Niemeier, 2 HWTA, 384-2918, jjniemei@engineering.uiowa.edu
Embedded systems and instrumentation; PhD, University of Iowa, 2010; Assistant Research Scientist, IIHR

A. Jacob Odgaard, 4114 SC, 335-5213, jacob-odgaard@uiowa.edu
Hydraulic engineering, hydraulic structures, hydraulic modeling, hydroninformatics, environmental fluid mechanics, river engineering, river mechanics, sediment management in rivers, Iowa vanes, stream bank erosion protection, and fish passage facilities; PhD, Technical University of Denmark, 1966; Professor, civil and environmental engineering

Thanos Papanicolaou, 323B SHL, 335-6448, athanasios-papanicolaou@uiowa.edu
Hydrodynamics, sediment transport, environmental fluid mechanics, and experimental hydraulics; PhD, Virginia Tech University, 1997; Professor, civil and environmental engineering

Marcela Politano, 310 SHL, 335-6393, marcela-politano@uiowa.edu
Total dissolved gas modeling, two-phase flow modeling, numerical modeling of hydraulic transients, particle tracking and dispersion, heat and mass transfer, and computational fluid dynamics; PhD, Instituto Balseiro (Argentina), 2001; Adjunct Assistant Professor, civil and environmental engineering, and Associate Research Engineer, IIHR

Seyed Hamid Sadat Hosseini, 233-4 SHL, 335-5580, hamid-sadathosseini@uiowa.edu
Computational fluid dynamics, free surface flows, and ship hydrodynamics; PhD, University of Iowa, 2009; Assistant Research Scientist, IIHR
Yugo Sanada, 1 Wave Basin Annex, 319-467-4572, yugo-sanada@uiowa.edu
Ship hydrodynamics; PhD, Osaka University, Japan, 2007; Associate Research Scientist, IIHR

Michelle Scherer, 4126 SC, 335-5654, michelle-scherer@uiowa.edu
Fundamental and practical aspects of chemical contamination of aquatic environments, heterogeneous processes occurring in both natural and engineered systems, including surface redox reactions and adsorption/complexation phenomena, and understanding and modeling the kinetics of transformation reactions at the mineral-water interface; PhD, OGI School of Science and Engineering, 1998; Professor and Chair, civil and environmental engineering

Doug Schnoebelen, 323A SHL, 335-6061, douglas-schnoebelen@uiowa.edu
Water quality, hydrology and water chemistry, and geochemistry of groundwater; PhD, Indiana University, 1999; Adjunct Assistant Professor, geoscience, Research Scientist, IIHR, and Director, Lucille A. Carver Mississippi Riverside Environmental Research Station (LACMRERS)

Jerald L. Schnoor, 4119 SC, 335-5649, jerald-schnoor@uiowa.edu
Water-quality modeling and dispersion processes; PhD, University of Texas, 1975; Professor, civil and environmental engineering

Ananya Sen Gupta, 4326 SC, 335-5947, ananya-sengupta@uiowa.edu
Signal and image processing, optimization, informatics, chemometrics, and environmental forensics; PhD, University of Illinois-Urbana-Champaign, 2006; Assistant Professor, electrical and computer engineering

Bongchul Seo, 323-7 SHL, 384-2042, bongchul-seo@uiowa.edu
Radar hydrology and rainfall uncertainties; PhD, University of Iowa, 2010; Assistant Research Scientist, IIHR

Charles Stanier, 4122 SC, 335-1399, charles-stanier@uiowa.edu
Atmospheric carbon dioxide, ultrafine atmospheric particles, atmospheric chemistry, aerosol health effects, and organic aerosol chemistry; PhD, Carnegie Mellon University, 2003; Associate Professor, chemical and biochemical engineering

Frederick Stern, 223C SHL, 335-5215, frederick-stern@uiowa.edu
6DOF viscous ship hydrodynamics, high performance multi-criteria CFD-based optimization for ship design, towing tank maneuvering test flow-map measurement system, and integration of simulation technology into undergraduate engineering courses and laboratories; PhD, University of Michigan, 1980; Professor, mechanical and industrial engineering

Aaron Strong, 334 JH, 335-2326, aaron-strong@uiowa.edu
Bio-economic modeling, water demand estimation, and environmental and resource economics; PhD, University of Colorado-Boulder, 2004; Assistant Professor, urban and regional planning

Eric Tate, 302 JH, 335-0259, eric-tate@uiowa.edu
Development of social vulnerability and resilience indicators, assessment of uncertainty and sensitivity in geospatial models, and GIS modeling in support of local and regional flood hazard mitigation; PhD, University of South Carolina, 2011; Assistant Professor, geography
H.S. Udaykumar, 2408 SC, 384-0832, hs-kumar@uiowa.edu
Numerical methods to materials processing, biofluid mechanics, elasto-plastic wave propagation in impacting media, fluid-structure interactions, and advanced numerical schemes for moving boundary problems; PhD, University of Florida, 1994; Professor, mechanical and industrial engineering

Sarah Vigmostad, 1410 SC, 384-2008, sarah-vigmostad@uiowa.edu
Computational fluid mechanics, cardiovascular biomechanics, multiscale modeling, fluid-structure interactions; PhD, University of Iowa, 2007; Assistant Professor, biomedical engineering

Gabriele Villarini, 306 SHL, 384-0596, gabriele-villarini@uiowa.edu
Hydrometeorology, climatology, extreme events, climate change, hurricanes, season forecast, remote sensing of rainfall, and applied statistics; PhD, University of Iowa, 2008; Assistant Professor, civil and environmental engineering

Zhaoyuan Wang, 223-B SHL, 335-6293, zhaoyuan-wang@uiowa.edu
CFD, free surface and interfacial flows, VOF and level set methods, free surface tracking, and surface tension modeling; PhD, University of Texas, 2006; Assistant Research Scientist, IIHR

Adam Ward, 36 TH, 353-2079, adam-ward@uiowa.edu
Movement of solutes through watersheds, and the ecological implications of these fluxes; how hydrological connections between streams, landscapes, and aquifers control biogeochemical processes in the environment; PhD, Penn State University, 2011; Assistant Professor, geoscience

Frank H. Weirich, 217 TH, 335-0156, frank-weirich@uiowa.edu
Geomorphology and related hydrologic processes, sediment transport and reservoir sedimentation, and watershed response to environmental changes; PhD, University of Toronto (Canada), 1982; Associate Professor, geoscience

Chris Wilson, 323-4 SHL, 335-6168, christopher-wilson@uiowa.edu
Erosion and sediment transport in watersheds, radionuclide tracers in environmental studies, and bank erosion; PhD, Case Western Reserve University, 2003; Assistant Research Scientist, IIHR

Jianming Yang, 223F SHL, 335-5749, jianming-yang@uiowa.edu
Fluid dynamics, fluid-structure interactions, and scientific computing; PhD, University of Maryland, 2005; Adjunct Associate Professor, mechanical and industrial engineering, and Research Scientist, IIHR

HyunSe Yoon, 223B-2 SHL, 335-5257, hyun-se-yoon@uiowa.edu
Ship hydrodynamics; PhD, University of Iowa, 2009; Assistant Research Scientist, IIHR

Nathan Young, 423C SHL, 384-1732, nathan-young@uiowa.edu
Ecohydraulics, field measurements, and freshwater mussel habitats; PhD, University of Iowa, 2006; Associate Research Engineer, IIHR, and Associate Director, Iowa Flood Center

Guangshu Zhai, 4105 SC, 335-5866, zhai-guangshu@uiowa.edu
Environmental science and engineering; PhD, RCEES, Chinese Academy of Sciences, 2008; Assistant Research Scientist, IIHR
You-Kuan Zhang, 213 TH, 335-1806, you-kuan-zhang@uiowa.edu
Subsurface hydrology, watershed hydrology, ecohydrology, field observation and modeling flow and contaminant transport in soil and aquifers, and analytical, numerical, geostatistical, and stochastic methods in subsurface hydrology; PhD, University of Arizona, 1990, Professor, geoscience
August 27, 2013

Dear New IIHR Affiliates,

Welcome to IIHR! Below is an overview of some of the services available from our professional administrative staff.

At the pre-award level, we will help you prepare and submit grants and contracts, including development of budgets and completion of necessary forms (see Carmen). We can also provide other support as requested (editing, collection and organization of supplementary documents, sharing of templates for standard grant elements, correspondence with the sponsor, etc.). We have had great experience with large multi-PI and multi-institution proposals! We will also help facilitate the successful completion of the contract paperwork through UI’s Division of Sponsored Programs.

After the project is awarded, IIHR’s accounting staff (led by Teresa) will work with you to manage your project funds. If you have a complex project, or are working on several projects, we can also prepare periodic projection reports to help keep track of funding and anticipate future needs. We also supply graphical representation of the spending pattern for your project. Specialized reports can be prepared for sponsor reporting if needed. If you would like to meet to discuss your finances, please set up a time to meet with Teresa Gaffey. Some researchers prefer to meet annually, but others may elect to meet once a month, depending on the complexity of the project.

We also process travel expense vouchers, reimbursements, UI credit card transactions (Pcard), and purchase orders. If you need a UI credit card to use for smaller purchases or travel expenses, let us know and we will initiate the process. We will select an IIHR accountant to process your travel and credit card transactions, but feel free to ask questions of anyone in the department. Departmental credit cards are also available for use if you only have periodic needs.

Travel arrangements can be made on your own, or you can ask Heather Hunter to help (including UI Fleet Services rentals). If you will be processing your own arrangements, it would be helpful to review UI travel policies ahead of time (http://www.uiowa.edu/purchasing/travel/index.html), or to talk to an accountant about your plans. The University of Iowa has preferred vendors and other rules you will want to know about before you travel.

Hiring students (see Carmen), postdoctoral associates, and other research staff (see Carmen or Teresa) for your projects can also be processed through IIHR. For staff and student recruitment, please discuss the process with the office staff to make sure you are adhering to UI human resources regulations.

IIHR has dedicated staff for external communications and design. This includes preparation of IIHR Currents, PowerPoint presentations, website updates, development of brochures, and other external communications efforts. IIHR’s website has “multisite capabilities,” with a variety of templates so individual researchers can develop and populate their own professional websites (see Carmen or Jackie Stolze). If you need to schedule a professional meeting or other work-related event at IIHR, we can help with room reservations, catering, AV equipment, and more (see Laura Myers).

Please contact us with any questions or needs you may have. We wish you the best in all your research endeavors!

Sincerely,

Teresa Gaffey
Director of Finances
107 SHL
Office: 335-6166
Email: teresa-gaffey@uiowa.edu

Carmen Langel
Director of Development and Communication
107-B SHL
Office: 335-5481
Email: carmen-langel@uiowa.edu
## General Administration:

<table>
<thead>
<tr>
<th><strong>Carmen Langel</strong>, Director of Development and Communications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administers communication, development, and other non-technical aspects of IIHR activity; handles university and IIHR policy questions; makes graduate assistant research assignments, and writes grant proposals and other reports. Supervises three administrative staff members.</td>
</tr>
<tr>
<td><strong>107-B SHL, 335-5841</strong></td>
</tr>
<tr>
<td><strong><a href="mailto:carmen-langel@uiowa.edu">carmen-langel@uiowa.edu</a></strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Laura Myers</strong>, Administrative Services Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides administrative support as needed, including website updates and support; as well as planning/set-up for meetings and presentations. Also serves as immigration liaison and point of contact to schedule meetings with IIHR Director Larry Weber.</td>
</tr>
<tr>
<td><strong>107 SHL, 335-5253</strong></td>
</tr>
<tr>
<td><strong><a href="mailto:laura-l-myers@uiowa.edu">laura-l-myers@uiowa.edu</a></strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Sara Steussy</strong>, Research Support Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assists in the development and implementation of communication and outreach programs for the Iowa Flood Center (IFC); and serves as an effective and knowledgeable liaison between IFC staff and external stakeholders, including agency personnel, policymakers, community leaders, and the general public.</td>
</tr>
<tr>
<td><strong>133-7 SHL, 384-1729</strong></td>
</tr>
<tr>
<td><strong><a href="mailto:sara-steussy@uiowa.edu">sara-steussy@uiowa.edu</a></strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Jackie Hartling Stolze</strong>, Lead Communication Specialist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develops content for website, newsletters, brochures, and other promotional materials in support of IIHR activities. Serves as project manager on major publications, working with external contractors.</td>
</tr>
<tr>
<td><strong>133-6 SHL, 335-6410</strong></td>
</tr>
<tr>
<td><strong><a href="mailto:Jackie-stolze@uiowa.edu">Jackie-stolze@uiowa.edu</a></strong></td>
</tr>
</tbody>
</table>
Connie Mutel, Senior Science Writer and Archivist
History of IIHR, IIHR archives, Iowa’s ecology/natural history, restoration ecology, interactions between landscape alteration, ecosystem services, and human perceptions.

- 423B SHL, 335-5315
- connie-mutel@uiowa.edu
**Accounting/Finance:**

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>Responsibilities</th>
<th>Contact Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teresa Gaffey</td>
<td>Director of Finances and Human Resources</td>
<td>Manages and coordinates all IIHR financial operations, budgets, grants, reports, and activities, including supervision of three accounting staff members. Also serves as IIHR’s human resources representative.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>107 SHL, 335-6166</td>
<td><a href="mailto:teresa-gaffey@uiowa.edu">teresa-gaffey@uiowa.edu</a></td>
<td></td>
</tr>
<tr>
<td>Sofia Castillo</td>
<td>Accountant</td>
<td>Provides accounting support services as needed, including the processing of travel vouchers, purchasing requisitions, procurement card expenses, and reimbursements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>107 SHL, 335-5233</td>
<td><a href="mailto:sofia-castillo@uiowa.edu">sofia-castillo@uiowa.edu</a></td>
<td></td>
</tr>
<tr>
<td>Melissa Eckrich</td>
<td>Accountant</td>
<td>Provides accounting services as needed, including processing employment paperwork, payroll, and purchasing requisitions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>133-8 SHL, 335-5845</td>
<td><a href="mailto:melissa-eckrich@uiowa.edu">melissa-eckrich@uiowa.edu</a></td>
<td></td>
</tr>
<tr>
<td>Sandy Gerard</td>
<td>Accountant</td>
<td>Provides accounting support services as needed, including collecting payments from staff and students for personal printing, fax, and copy charges, as well as processing travel vouchers, purchasing requisitions, procurement card expenses, and reimbursements.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>133-3 SHL, 335-5217</td>
<td><a href="mailto:sandy-gerard@uiowa.edu">sandy-gerard@uiowa.edu</a></td>
<td></td>
</tr>
<tr>
<td><strong>Megan Hauswirth</strong>, Administrative Services Coordinator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides accounting support services as needed, including collecting payments from staff and students for personal printing, fax, and copy charges, as well as processing travel vouchers, purchasing requisitions, procurement card expenses, and reimbursements. Also distributes office and building keys.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- 107 SHL, 384-0611</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- <a href="mailto:megan-hauswirth@uiowa.edu">megan-hauswirth@uiowa.edu</a></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Heather Hunter</strong>, Secretary/Receptionist</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides secretarial services as needed, including greeting guests; answering general lab phone and directs calls; managing facilities maintenance and repair; coordinating copy and fax machine repair; managing furniture and office machine acquisition and repair; routing proposals; running errands; and ordering and inventoring office supplies.</td>
</tr>
<tr>
<td>- 100 SHL, 335-5237</td>
</tr>
<tr>
<td>- <a href="mailto:heather-hunter@uiowa.edu">heather-hunter@uiowa.edu</a></td>
</tr>
</tbody>
</table>
RESEARCH COMPUTING SUPPORT

August 27, 2013

Dear IIHR Faculty Affiliates,

Welcome to IIHR!

Please look over the following materials related to the IIHR’s support of research computing. I believe research computing is an identifiable subset of Information Technology that specializes in the kind and type of computation and support resources needed to execute a successful research program. Research computing focuses on acquisition, processing, storage, presentation, and archiving of research materials, data, codes, and publications involved in vibrant research activity. My group, Research Computing Support (RCS), strives to provide an efficient and effective computational platform for your research and leaves the day-to-day IT-related functions, such as email, to groups on campus that specialize in those services. RCS is, however, your point of contact for any IT-related question, and we will gladly find a solution provider if we don’t provide the support function ourselves.

Please feel free to contact me with any questions you may have. I look forward to working with you.

Sincerely,

Mark Wilson
Director of Research Computing
423A SHL
Office: 335-5223
Email: mark-wilson@uiowa.edu
Overview

Research Computing Support (RCS) staff members enable a wide range of research activities within IIHR. Staff recommend, purchase, maintain, and dispose of computing- and technology-related equipment, software, communication, networking, and storage devices. RCS provides the computing foundation for all activities of IIHR, including compute, web, ftp, authentication, storage, and backup servers, as well as specialized software and laboratory data acquisition devices and codes. RCS staff members assist with access to IIHR-, College of Engineering-, and university-provided resources and services, ranging from desktop systems to High Performance Computing (HPC) systems and techniques.

Meet the Research Computing Support Staff

**Mark Wilson**, Principal Engineer, Director of Research Computing
Administers all research-oriented computing at IIHR, including experimental data acquisition design, computation, assistance with complex computational fluid dynamics (CFD) flow models, systems and network administration, and creation of graphic arts. Supervises research computer support staff and student technical assistants.

- 423A SHL, 335-5223
- mark-wilson@uiowa.edu

**Brian Miller**, Senior Systems Administrator
Designs, installs, and configures networked computing systems, including administration, security, and maintenance of hardware and software. Maintains operating system software and user account management in a blended Windows, Linux, and Mac OS environment.

- 423F SHL, 335-5321
- brian-s-miller@uiowa.edu

**Eric Prill**, Systems Administrator
Assists in the design, installation, and configuration of networked computing systems, including administration, security, and maintenance of hardware and software. Maintains operating system software and user account management in a blended Windows, Linux, and Mac OS environment.

- 423 SHL
- eric-prill@uiowa.edu
Margaret R. Nelson, Applications Developer
Develops web based database applications to support IIHR research and internal operations, to provide maintenance and support of these applications, as well as web presentation of information.

- 423-1 SHL, 335-6272
- margaret-r-nelson@uiowa.edu

Jessica Bristow, Creative Media Specialist
Leads IIHR in graphics arts and production in 2-D and 3-D illustrations, posters, photos, video, and public displays. Designs and executes accurate 3-D models in support of IIHR projects

- 423 SHL
- jessica-bristow@uiowa.edu

Where We Are:

The IIHR Research Computing Support group has offices on the fourth floor of SHL, with an assembly and repair area in room 27 SHL (below room 127 at the south end of SHL – take the south steps down one level and turn north).

Hours:

Computing assistance is available from our assembly/repair area in room 27 SHL. This area is open Monday through Friday and follows the flexible hours of the student workers. If you need assistance and this area is not open, please contact Brian Miller or any of the RCS staff.

Equipment and Resources:

IIHR maintains a diverse set of computing resources and facilities. The following is a partial list of equipment, services, and software available to all IIHR affiliates and students.

- The primary compute platform is a High-Performance Compute (HPC) cluster called Helium. It is a shared system built from Hewlett-Packard DL160 nodes that features three, 304 total cores, 10.6 TB of memory, more than 500 TB of storage, a 40 Gbps Voltaire Infiniband QDR message passing fabric for MPI communications, and three Ethernet networks for management and NFS storage. The cluster queuing system, Sun Grid Engine, provides access to very large jobs, well beyond the limits of the dedicated hardware for any individual user. The programming environment includes OpenMP, MPI, and the Intel and GNU compiler and tool suites. The cluster was acquired with funding from the NIH, AFOSR, and a number of individual researcher-led contributions, in addition to monies from the College of Engineering and the university provost.
It is operated by IIHR—Hydroscience & Engineering in conjunction with ITS and a group of collaborative researchers.

- A second HPC system, Neon, is being acquired in the fall of 2013 to augment HPC resources available to IIHR researchers. Like Helium, Neon will be operated by IIHR—Hydroscience & Engineering in conjunction with ITS and a group of collaborative researchers from around the university. Neon is a shared system with, currently, 1800 cores, 4 TB memory, 500 TB of storage, and 40 Gbps Infiniband QDR message passing fabric.

- Smaller clusters are dedicated to a set of specialized applications. A dedicated PIV render cluster comprised of three dual-socket dual core Xeon processors in Mac Pro systems is used for image processing of PIV data. An additional three dual-socket dual core Xeon Mac Pro systems are dedicated to Fluent jobs running under Windows-64.

- HPC at IIHR is augmented by 10 Silicon Mechanics storage units, providing 500 TB of storage in a RAID 60 configuration. This storage space is replicated to an offsite location with hourly snapshots taken for user-invoked file recovery. IIHR also operates dedicated project storage arrays based on Apple XServer/EServer RAID architecture, with close to 15 TB of additional storage.

- Very large-scale computations are done at national and international computation centers accessed through longstanding IIHR-center relationships. In addition to the NSF and DOD/DOE centers, IIHR has developed a continuing collaboration with the National Center for High Performance Computing (NCHC) in Taiwan.

- Supporting the local centralized facilities are 60 Linux workstations and more than 240 individual PCs running MS Windows 7. There are 24 PC-based servers handling web, ftp, security, and specialized database services. In addition, a number of Blu-Ray mass-storage devices, publication-quality color printers, scanners, cameras, and other peripherals are in use.

- This hardware is complemented by a carefully selected set of public domain, commercial, and proprietary software packages that include Tecplot, Gridgen, Fluent, FlowLab, Matlab, Origin, ERDAS, ERMapper, ERSI, Skyview, and the core GNU utilities. Additionally, software such as AutoCAD, MS Windows, MS Office, OS X, Mathematica, IDL, SigmaPlot, and SAS, are used under university-wide site licenses.
Phase One (first half) of the Helium Cluster, located in Lindquist Data Center
August 27, 2013

Dear IIHR Faculty Affiliates,

I would like to sincerely welcome you to IIHR, and I hope your work here will be successful and rewarding. IIHR has the responsibility to provide staff and resources to assist and support your research activities. Our goal in Engineering Services is to provide high-quality resources that will play a key role in your success as educators and researchers. Please take a few moments to read the following policies and guidelines regarding the use of our shops and facilities. These are designed to ensure a safe, organized, and professional work environment for all who work, study, or conduct research using the facilities and/or assistance of the Engineering Services staff.

Please don’t hesitate to contact me with any questions you may have. I look forward to meeting you and assisting with your research needs.

Sincerely,

Troy Lyons
Director of Engineering Services
519 SHL
Office: 335-5319
Email: troy-lyons@uiowa.edu
Overview

Engineering Services staff support IIHR research and educational activities in the laboratories, as well as in the field. Staff develop, construct, and maintain research apparatus, equipment, models, and facilities to support IIHR’s educational and research mission. Staff strive to achieve these goals in the most responsive, accurate, efficient, and cost-effective means possible.

Key resources in the Engineering Services group include IIHR’s Mechanical, Electronics, and Machine Shops, located in the South Campus annexes. The Engineering Services group currently employs 16 full- and part-time staff and 11 undergraduate student employees. Please visit the IIHR website for a complete list, description, and interactive map of the facilities: http://www.iihr.uiowa.edu/facilities/.

Meet the Engineering Services Staff:

| Troy Lyons, M.S., P.E., Principal Engineer, Director of Engineering Services |  
| Coordinates and directs engineering support services and provides engineering support related to design and conduct of hydraulic modeling studies. Serves as PI on numerous projects and contracts. |  
| • 519 SHL, 335-5319 |  
| • troy-lyons@uiowa.edu |  

| Greg Wagner, Design Engineer, Electronics Support |  
| Provides technical expertise relating to electronics equipment and instruments, interfacing, and data-acquisition instrumentation for experiments. Manages all electronics staff and resources. |  
| • 4 HWTA, 335-5004 |  
| • gregory-wagner@uiowa.edu |  

<p>| Andy Craig, Design Engineer |<br />
| Provides engineering support for a wide variety of research projects. Specializes in physical hydraulic modeling and river surveys. Expert in GIS, LabVIEW, and other engineering data software programs. |<br />
| • 3 HWTA, 384-2801 |<br />
| • <a href="mailto:andy-craig@uiowa.edu">andy-craig@uiowa.edu</a> |</p>
<table>
<thead>
<tr>
<th>Name</th>
<th>Role</th>
<th>Responsibilities</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| Brandon Barquist            | Engineering Specialist, Mechanical Shop Supervisor | Coordinates personnel and resources related to the design and construction of specialized flumes and physical models for IIHR research projects. Also supervises the construction of fluids-teaching laboratory equipment and maintenance of IIHR facilities. | 5 HLMA, 384-3273  
  brandon-barquist@uiowa.edu |
| Tim Houser                  | Engineering Coordinator                   | Provides expertise in coordination and construction of laboratory research projects, procurement of materials and supplies, and providing labor and materials cost estimates for new projects. | 4 HLMA, 384-0936  
  timothy-houser@uiowa.edu |
| Christian Borgwardt        | Engineering Specialist, Assistant Shop Manager | Provides skilled machining and fabrication support for laboratory models and instrumentation. | HEA Loft A, 384-2017  
  christian-bogwardt@uiowa.edu |
| Jonathan Durst              | Research Associate I                      | Provides engineering support, including EES health and safety, analytical instrumentation, laboratory personnel management, IIHR laser safety, radioactive materials, and chemical inventories. | 4105 SC, 335-5647  
  jonathan-durst@uiowa.edu |
<table>
<thead>
<tr>
<th>Name</th>
<th>Position</th>
<th>Responsibilities</th>
<th>Contact Information</th>
</tr>
</thead>
</table>
| **Jason Knox**    | Engineering Assistant           | Provides drafting support for laboratory model construction, instrumentation design, and support for CNC machines. Specializing in 3D drawings using Creo (ProE) and SolidWorks.  
- HEA Loft A, 335-6087  
- [jason-knox@uiowa.edu](mailto:jason-knox@uiowa.edu) | ![Jason Knox](image) |
| **Jim Goss**      | Lead Welding Foreman            | Provides support for laboratory model construction, with expertise in welding, carpentry, metal-working, and painting.  
- HLMA, 335-5249  
- [james-goss1@uiowa.edu](mailto:james-goss1@uiowa.edu) | ![Jim Goss](image) |
| **Robert Nace**   | Engineering Assistant           | Provides general support for laboratory model construction, including welding, carpentry, and metal-working.  
- HWTA  
- [robert-r-nace@uiowa.edu](mailto:robert-r-nace@uiowa.edu) | ![Robert Nace](image) |
| **Rick Saeugling**| Engineering Assistant           | Provides general support for laboratory model construction, including welding, carpentry, and metal-working.  
- HLMA  
- [richard-saeugling@uiowa.edu](mailto:richard-saeugling@uiowa.edu) | ![Rick Saeugling](image) |
Rick Grambo III, Engineering Assistant
Provides general support for laboratory model construction, including welding, carpentry, and metal-working.
- HWTA
- harry-gramboiii@uiowa.edu

Hours:
Mechanical Shop hours are 7:30 a.m.–5 p.m., Monday through Thursday, and
7:30 a.m.–4:30 p.m. on Friday. IIHR buildings are open during these work hours, but must remain locked
at all other times. Doors must not be unlocked or propped open outside stated working hours.

Safety
IIHR takes the safety of students, staff, and faculty very seriously. Due to the ongoing construction and
research projects in many of our laboratories, safety precautions are paramount. Mandatory training to
operate lasers, power equipment, forklifts, scissors lift, trailers, boats, etc., is required for all students,
faculty, and staff who will be using the equipment. Due to safety and liability concerns, much of the
equipment cannot be used by students without proper training AND direct supervision of shop staff.
Greg Wagner, Brandon Barquist, or Tim Houser should be contacted regarding permission to use
equipment and required safety training.

Equipment and Resources:
For the convenience of Mechanical Shop personnel, equipment and tools are kept in unlocked,
unsecured areas of several IIHR buildings. Although it may appear as if these tools are available for
anyone to use, this is not the case. The following is intended to clarify the uses, purposes, and
procedures related to IIHR Mechanical Shops resources.

- **Hand and Power Tools:** Shop tools and equipment are essential to our daily work. They are also
  expensive and potentially dangerous. **ONLY Mechanical Shop personnel are allowed to use power equipment.** Many Mechanical Shop machines can amputate a limb without warning or effort. The hand tools, while much safer to use, are generally not “loaned out.” The shop has hand tools that are dedicated to student and/or researcher use wherever needed in our facilities. If these tools do not seem to be available, or if special tools are required, please talk to Mechanical Shop Supervisor Brandon Barquist.

- **Pumps:** **Start-up, shut-down, unattended operation, maintenance, high voltage.** Many types of
  pumping equipment are available, each with its own peculiarities. While some pumps can be
  used unattended, others cannot. Some are simple to operate, and others are complex. **Pump operations should be reviewed with Brandon Barquist prior to use.**

- **Electrical Power:** **Building electrical supply, overloading, interruptions, locations, ground fault interrupters.** Electricity and water do not mix. Please discuss power usage with Brandon Barquist
or Greg Wagner if it is beyond what is required to light your work area or operate your computer. Annually, the fire marshal cites IIHR for any improper use of electrical power near wet areas.

- **Vehicles:** IIHR maintains a variety of vehicles for the use of faculty, staff, and occasionally students. Requests for vehicle use should generally be directed to Laura Myers (IIHR main office), Brandon Barquist (Mechanical Shop), or Greg Wagner (Electronics Shop), depending on which vehicle is requested. IIHR vehicles may be used for authorized IIHR business only.

- **Protocols:** Income from research grants and contracts provides funding for the Engineering Services Shops and their personnel and supplies/equipment. The shop receives no state funding. Therefore, an IIHR account number is required for almost any work done in the shop. Time and materials will be charged to this account number.

- **Protocol for Shop Requests:**
  - Task requests must be approved by the student’s advisor or the project PI.
  - Task requests should be directed to Brandon Barquist.
  - If possible, shop staff requires drawings and/or sketches, or at minimum written descriptions of the requested work.
  - Shop staff and the work requester must come to an agreement on the maximum charge and completion time frame for the task or project.
  - The requester should clearly communicate any specific or unusual requirements.

- **Use of Shop Materials:** The shop has a large inventory of miscellaneous materials, fasteners, widgets, gizmos, and otherwise interesting stuff, which is kept on hand for a wide variety of needs. In many cases, these items can be donated or lent to research efforts. Other items must remain available for shop use. Students and others should talk to Brandon Barquist about use of these items.

- **Boats:** IIHR has a variety of boats and instrumentation available for use in field data collection programs. Available boats range from kayaks for small streams and backwater areas to large multi-engine boats suitable for large navigable rivers and lakes. Boat and instrumentation reservations should be coordinated through Greg Wagner. IIHR has strict boat operator requirements and can provide a qualified boat operator with advance notice. Boat operator training can be provided on an as-needed basis for longer term projects. Training should be discussed with and coordinated through Troy Lyons.

- **Recharge Rates:** IIHR maintains a wide variety of equipment and instrumentation, including state-of-the-art survey equipment, flow meters, velocity meters, generators, boats, vehicles, trailers, field laptops, and many other items that are available for lease to projects on a first-come first-served basis. The revenue generated from use of this equipment is used to maintain existing equipment in good working order, update equipment as needed, and invest in additional equipment. See Greg Wagner regarding rates, reservations, and use of the equipment.

Updated Jan. 17, 2014