The Start-Up Directory
University of Illinois at Urbana-Champaign (Illinois) is a world-class research institution boasting a respected faculty, high national rankings, and state-of-the-art facilities. The University’s accomplishments include 22 Nobel Laureates between its faculty and alumni, and revolutionary innovations such as the web browser, new plant varieties and even the discovery of a third form of life.

Illinois’ entrepreneurial momentum is high. The Association of University Research Parks named the University’s technology park as the 2011 Outstanding Research Park, recognizing its excellence in transitioning technology from the laboratory to commercially viable businesses. The Research Park, currently home to more than 90 companies, was also named by Forbes in 2010 as one of “10 Incubators That Are Changing the World.”

The research and innovation that comes out of Illinois has a profound impact on human lives and creates businesses, jobs, and economic well being.

Office of Technology Management

Our mission is to encourage innovation, enhance research, and facilitate economic development through the transfer of intellectual property.

In its primary area of responsibility, the office provides in-house technology protection and commercialization services to transfer intellectual property created on the Urbana campus into practical use to benefit the public as quickly and effectively as possible.

From Lesley Millar
Director, Office of Technology Management

This directory provides a summary of start-up companies who have licensed intellectual property from the University of Illinois at Urbana-Champaign.

The breadth and depth of innovation in the companies represented here is a reflection of the incredible range of groundbreaking research conducted on campus every day.

I invite you, to get to know these companies and through them, this University.

OTM Start-Ups Across the Country
Information Technologies • Savoy, IL
4D TELEPORT
www.4dteleport.com
4D Teleport’s multimedia networking technologies lower the costs of deploying distributed multi-modal multimedia applications, while increasing their flexibility and scalability. 4D Teleport’s technology platform reduces the time to design and implement applications, where synchronization between streams and the minimization of end-to-end delays is vital. The platform can be scaled to multiple sites and can manipulate streams from multimodal input and output devices, resulting in simpler and faster upgrades or reconfiguration of applications. Based on the research of Dr. Klara Nahrstedt.

Life Science • Champaign, IL
ANDALYZE
www.andalyze.com
ANDalyze offers products for testing water contamination using catalytic DNA technologies. The company has developed a methodology for detecting and quantifying chemical levels based on the recent discovery of the catalytic properties of DNA. This technology and product is a universal platform that offers simple, fast, inexpensive and reliable detection of trace metals and other target chemicals. Based on the research of Dr. Yi Lu.

Information Technologies • Champaign, IL
ADRENALINE MOBILITY
www.adrenalinemobility.com
Adrenaline provides secure backend services for mobile apps. Adrenaline combines the scalability, simplicity, and performance of the cloud with military-grade security for mobile apps. Based on the research of Dr. Samuel King.

Life Science • Champaign, IL
APRIORI
www.apriori.com
aPriori is a software company that develops and markets product cost management software. Using aPriori’s real-time product cost assessments, employees in sourcing, manufacturing, and design engineering make more informed decisions that drive costs out of products pre- and post-production. With aPriori, manufacturers launch products at cost targets, maximize savings in re-work projects and do not overpay for sourced parts. Based on the research of Dr. Michael Philpott.

Life Science • Champaign, IL
APTI MMUNE BIOLOGICS
www.apptimmune.com
Aptimmune Biologics specializes in the development and application of prophylactic measures against viral diseases of swine. It focuses on bringing effective prophylaxis against Porcine Reproductive and Respiratory Syndrome (PRRS) virus into the market. Aptimmune utilizes novel technologies to create effective vaccines against PRRS, such as the proprietary pig alveolar macrophage cell line ZMAC. Based on research from founder Federico Zuckermann.
The Geochemists Workbench is a set of software tools for solving water quality problems, including those encountered in environmental protection and remediation, the petroleum industry, and mine wastewater planning. The software is used in more than 1,000 companies, universities and research institutions and is essential for water engineers, aqueous chemists, geochemists and anyone else working with water quality data. Aqueous Solutions will continue the distribution of the Geochemists Workbench. Based on the research of Dr. Craig Bethke.

Armored Computing provides low-cost, scalable software solutions to build and evaluate high-availability applications and systems. Based on the research of Dr. Ravishankar Iyer.

Autonomic Materials, founded by Drs. Scott White, Nancy Sottos, Jeffrey Moore, and Paul Braun, is developing self-healing technologies that extend the lifetime of coatings. The technologies can be used in elastomer coatings, thermosetting coatings, and powder coatings, making them useful across a wide range of markets, from marine to aerospace. Based on the research of Dr. Ravishankar Iyer.

Cazoodle provides software and internet services for Web search, integration, and mining, with a central objective to “deepen” search on the Web to access the vast amount of data beyond the reach of current search engines. Based on the research of Dr. Kevin Chang.

Catylix specializes in the development of novel catalysts and reagents for chemical synthesis. One of the most efficient ways to improve the pharmacokinetic properties of a bio-active compound is to introduce fluorine or a fluorine-containing functional group. Incorporating just a single fluorine atom or fluorine-containing functionality can dramatically improve the pharmacokinetic properties of a potential drug. Catylix is focused initially on developing a new method for the incorporation of trifluoromethyl groups into compounds. Based on the research of Dr. John Hartwig.

Cbana Laboratories is commercializing adsorbents as well as microfluidic and microanalytical devices, originally developed by Drs. Richard Masel and Mark Shannon for the capture and analysis of pollutants, drugs, and other dangerous materials.
CU Aerospace

Physical Science Greentech • Frisco, TX • Champaign, IL
CU AEROSPACE
www.cuaerospace.com
CU Aerospace engages in identifying and developing promising new aerospace technologies, with the ultimate goal being commercialization and distribution of those technologies. Based on research by Drs. Scott White, Michael Bragg, Wayne Solomon, and others.

CU Aerospace

DiOxiDe Ma Terials, Inc.
dioxidematerials.com
Dioxide Materials develops and licenses new technology for CO2 remediation. This includes technology to reduce the amount of CO2 that is produced and technology to create uses for any CO2 that is formed. The company’s focus is on devices that reduce the carbon footprint of homes and businesses and processes that convert waste CO2 into useful fuels and chemicals. The company aims to make homes and businesses safer and more energy efficient and to reduce the carbon footprint of US industry. Based on the research of Dr. Richard Masel.

Life Science • Champaign, IL
DIAGNOSTIC PHOTONICS
www.diagnosticphotonics.com
DxP enables clinicians to see tissue at the microscopic level and provide crucial histological insight at the moment it is most needed. Diagnostic Photonics (DxP) has a proprietary imaging technology to help clinicians evaluate diseased tissue during surgery. Based on the research of Drs. P. Scott Carney and Stephen Boppart.

Life Science • Champaign, IL
GlucoSentient
www.glucosentient.com
GlucoSentient detects drug molecules, contaminants, and adulterants using personal glucose meters. GlucoSentient’s technology, which translates the amount of non-glucose target to glucose, transforms the personal glucose meter into a device that is capable of quantitatively and conveniently detecting other non-glucose targets. Based on the research of Dr. Yi Lu.

Physical Science • Champaign, IL
DIODE MATERIALS, INC.
dioxidematerials.com
Dioxide Materials develops and licenses new technology for CO2 remediation. This includes technology to reduce the amount of CO2 that is produced and technology to create uses for any CO2 that is formed. The company’s focus is on devices that reduce the carbon footprint of homes and businesses and processes that convert waste CO2 into useful fuels and chemicals. The company aims to make homes and businesses safer and more energy efficient and to reduce the carbon footprint of US industry. Based on the research of Dr. Richard Masel.

Physical Science • Champaign, IL
EPIWORKS
www.epiworks.com
EpiWorks is a next-generation semiconductor epitaxial design and manufacturing company that brings expertise with epitaxy, device design, and manufacturing under one roof. EpiWorks is the exclusive producer of several advanced layers and processes that are tailored for optimal performance in particular applications. EpiWorks products are geared toward enabling higher performance integrated circuits (ICs) for the communications industry, leading to cell phones with longer battery life and high-speed Internet access for the home and office. Based on the research of Drs. Quesnell Hartmann, David Ahmari, and late Dr. Gregory Stillman.

Physical Science • Champaign, IL
EDEN PARK ILLUMINATION
www.edenpark.com
Eden Park Illumination is commercializing Microcavity Plasma “microplasma” lighting technology. This platform technology is a new light source innovation. It offers unique advantages over both traditional light sources, such as incandescent and fluorescent, and the newer lighting technologies, light emitting diodes “LED” and organic light emitting diodes “OLED”. Based on the research of Drs. Gary Eden and Sung-Jin Park.

Life Science • Champaign, IL
GlucoSentient, Inc.
www.glucosentient.com
GlucoSentient detects drug molecules, contaminants, and adulterants using personal glucose meters. GlucoSentient’s technology, which translates the amount of non-glucose target to glucose, transforms the personal glucose meter into a device that is capable of quantitatively and conveniently detecting other non-glucose targets. Based on the research of Dr. Yi Lu.
The purpose of The HDF Group is to ensure the sustainable development of HDF technologies and the ongoing accessibility of HDF-stored data. This is important because of the government and public organizations that have mission-critical systems relying on HDF technologies. Academia and a variety of other industry sectors also depend heavily on HDF technologies; however, the vast majority of HDF’s core users and financial support come from the government sector. Based on the work of Michael Folk and the Graphics Foundation Task Force at NCSA.

Hoowaki develops microtechnology for improved, functional surfaces on extruded products and processes. We reduce sliding friction, lower drag along the surface, and control surface tension, among other phenomenal capabilities. Using our proprietary technology, Hoowaki creates microstructured surfaces on industrial tooling to create micron-sized features on your polymer and metal surfaces. We serve customers in the medical, wire and cable, and materials industries. Based on the research of Dr. William P. King.

ILLUMIA provides knowledge, analysis, measurement, and consulting services for safety and risk management, decision making, fatigue risk management, and performance understanding in high reliability organizations. Building on more than ten years of development and validation, Illumia’s detailed, precise methods assess the impact of culture— including interactions among diverse working groups—on safety-related attitudes and organizational behavior. Based on the research of Dr. Terry von Thaden.

ImmuVen develops novel drugs that can be used to treat infectious diseases and cancer. The company harnesses a powerful, emerging life science technology—T cell receptors—which are a unique class of immune-targeting therapeutic and diagnostic agents. These agents have significant advantages over antibodies, which are already a $20 billion/year market against cancer, autoimmune, and infectious diseases. Based on the research of Dr. David Kranz and Dr. Patrick Schlievert of the University of Iowa.

INI Power Systems is focused on commercializing direct methanol Laminar Flow Fuel Cells that combine methanol—a high energy density and logistically friendly liquid fuel—with a revolutionary fuel cell concept. Designed to replace or augment batteries to supply longer-lasting power for portable devices, the diverse applications include soldier portable power, remote sensing and surveillance, mobile communications, and numerous consumer electronic devices, such as laptop computers, PDAs, and cell phones. Based on the research of Dr. Larry Markoski.

InstaRecon is a supplier of technology and services to imaging scanner equipment makers and supply chain partners, increasing the computational efficiency of image reconstruction in CT, PET, SPECT, and MRI. Based on the research of Dr. Yoram Bresler and Dr. David Munson of the University of Michigan.
Information Technologies • Champaign, IL
LK4
www.lk4technology.com
LK4 Technology Corporation licensed the University’s web accessibility wizard, a technology that provides a simple way to create web versions of Microsoft Office documents that are more accessible and usable by everyone, including people with disabilities. Based on the research of Dr. Jon Gunderson.

Greentech • Champaign, IL
MAIZE PROCESSING INNOVATORS (MPI)
www.maizepi.com
MPI is the exclusive marketer of the patented wet fractionation process known as Quick Germ / Quick Fiber (QQ), that can be added to any dry grind ethanol plant to enhance coproduct value and improve overall fermentation and energy efficiency. The QQ process is the most economical and efficient prefractionation process available. Based on the research of Dr. Vijay Singh.

Physical Science • Cambridge, MA
MC10
www.mc10inc.com
MC10 is developing processes and applications that enable high performance electronics to be placed in novel environments and form factors. MC10’s approach transforms traditionally rigid, brittle semiconductors into flexible, stretchable electronics, while retaining excellent electrical performance. Stretchable silicon allows for a degree of design freedom capable of expanding the functionality of existing products, while providing a platform on which new microelectronic-enabled applications can be developed. Based on the research of Dr. John Rogers and Dr. George Whitesides of Harvard University.

Life Science • Mountain View, CA
METABOLOMX
www.isensesystems.com
Metabolomx (formerly iSense) has developed technology enabling the identification of lung cancer from breath. Based on the research of Dr. Kenneth Suslick.

Physical Science • Chicago, IL
MICROLUTION
microlution-inc.com
Microlution Inc. is a machine tool manufacturer, specializing in building high performance CNC machine tools that have been optimized to fabricate small high precision parts. Microlution’s “micro” machine tools are based on the concept that small high precision parts should be machined on small high performance machine tools. Based on the research of Dr. Shiv Kapoor and the late Dr. Richard Devor.

Information Technologies • Urbana, IL
MULTICOREWARE, INC.
www.multicorewareinc.com
MulticoreWare is a software and systems integration solutions company that provides heterogeneous multcore solutions for high performance computing applications. The company is currently working on applications in industries such as defense and aerospace, bio-informatics, life sciences, imaging, scientific computing, and financial services. MulticoreWare embraces heterogeneous computing, and its solutions benefit customers who require a higher order of magnitude performance with power and space constraints. Based on the research of Dr. Wen-mei Hwu. MulticoreWare has offices in Urbana, Illinois; St. Louis Missouri; and Saratoga, California.

Information Technologies
MYFOODRECORD.COM
www.myfoodrecord.com
Myfoodrecord.com aims to empower individuals to select a nutrient dense diet. Developed by Jim Painter and Chris Hewes.
Newell Instruments specializes in energy conversion, air conditioning, refrigeration, heat transfer, fluid mechanics, controls and instrumentation, solar energy, and building technology that has resulted in a broad range of project activities and clients. Based on the research of Dr. Ty Newell.

Newell Instruments
newellinstruments.com

Personify makes video more useful in online communications. The company’s audio-visual conference technology provides customers with presence through a virtual green-screen, where they can chat with friends in a virtual space complete with interesting backgrounds. The virtual space can be utilized as a presentation tool, by letting presenters be in the same space as their PowerPoint or video presentation, which allows for a more realistic, face-to-face experience. Based on the research of Drs. Sanjay Patel and Minh Do.

Personify
www.personifyinc.com

Prairie Gold is a technology and development company with a portfolio of patented technologies related to the production of high-value products from corn. The company’s mission is to provide ethanol producers with a diversified mix of products, in order to withstand the fluctuations in ethanol and corn prices by developing new technologies and high-value coproducts from what is normally the low-value feed portion of the corn. Based on the research of Dr. Munir Cheryan.

Prairie Gold
www.prairie-gold.com

Protasis designs target molecule purification and analysis instruments for the structural biology and proteomics markets. Based on the research of Drs. Jonathan Swedler, Richard Magin, and Timothy Peck.

Protasis
www.protasis.com

Phi Optics develops optical imaging systems through its Quantitative Phase Imaging platform. The company targets applications in life sciences, medical diagnostics, nanotechnology, and semiconductor testing. Phi Optics technology combines the traditional modalities of a light microscope with the real-time 3D topography capabilities of QPI, offering a significant advantage for applications that require low-cost, fast and accurate imaging of nanostructures. Based on the research of Gabriel Popescu.

Phi Optics
www.phi-technologies.com

Protasis
www.protasis.com

Greentech
www.prairie-gold.com

Prairie Gold, IL

Protasis
www.protasis.com

Protasis, IL
Life Science, Information Technologies • Chicago, IL

**PROTEINACEOUS**
The company consists of the technical development team for the ProSight PC Software, which is exclusively licensed and sold through Thermo Electron Corporation. ProSight PC is a protein identification software system that allows identification and characterization of intact proteins and their post-translational modifications (PTMs) using the method of top-down sequencing. Proteinaceous was founded by Dr. Neil L. Kelleher.

**Runtime Verification, Inc.**
Runtime Verification is a computing system analysis and execution approach based on extracting information from a running system and using it to detect and possibly react to observed behaviors satisfying or violating certain properties. Some very particular properties, such as datarace and deadlock freedom, are typically desired to be satisfied by all systems and may be best implemented algorithmically. Other properties can be more conveniently captured as formal specifications. Runtime verification specifications are typically expressed in trace predicate formalisms, such as finite state machines, regular expressions, context-free patterns, linear temporal logics, or extensions of these. This allows for a less adhoc approach than normal testing. Based on the research of Dr. Grigore Rosu.

**Semprius**
Semprius develops low cost, high performance concentrator photovoltaic (CPV) modules to make solar power generation economically viable in sunny, dry climates. The company’s unique micro-transfer printing technology enables CPV modules with high performance, high reliability and low cost with scalability to high-volume production. Based on the research of Drs. John Rogers and Ralph Nuzzo.

**Serionix**
Serionix develops high performance technologies for water and air purification. Using fibrous activated carbon and ion-exchange materials, Serionix purification is differentiated by rapid rates of contaminant uptake, well-defined selectivity for targeted chemicals, and potential for low-cost production. Based on the research of James Economy.

**SFM Technology, Inc.**
SFM Technology is a software development and engineering services company, providing products and services to enable scalable flexible manufacturing. In addition to the ongoing development and support of products, SFM and its principals are engaged with a variety of clients to provide engineering consulting services in the domains of product data modeling, manufacturing information systems, geometric modeling and computation, optimization, process planning and scheduling, and simulation, as well as to develop and support custom manufacturing applications. Based on the research of Drs. Placid Ferreira and James Stori.

**ShareThis**
ShareThis makes it easy to share ideas and get to the good stuff online. Reaching over 400 million users across 130,000 sites across the web, ShareThis is changing the economics of online publishing by creating a market of influence across the web. ShareThis allows users to share content from anywhere to anyone, while simultaneously enabling publishers and advertisers to tap the value of sharing. Includes research developed by Dr. David Goldberg.
Greentech • Champaign, IL
**SNAPSHOT ENERGY**
Snapshot Energy explores ways to reuse wastewater for biomass production to create crude oil. Based on the research of Dr. Lance Schideman.

Greentech • Austin, TX
**SOLARBRIDGE TECHNOLOGIES**
www.solarbridgetech.com
SolarBridge Technologies is a leading developer of solutions that reduce the levelized cost of energy (LCOE) in solar installations. This is accomplished through an innovative microinverter and monitoring system that dramatically improves reliability, increases energy production, and dramatically simplifies installation. Based on research by Drs. Philip Krein and Patrick Chapman.

Life Science • Champaign, IL
**SPECTROCLICK**
Spectrophotometers and spectrofluorimeters have typically been laboratory instruments. SpectroClick hopes to put such instruments into the hands of individuals. SpectroClick’s technology allows poor array detectors, either stand-alone digital cameras or cameras in tablet computers or cell phones, to measure signals over a wide range of intensities, thus enabling just about anyone to measure water purity, soil chemistry, and even some medical diagnostics. Based on the research of Dr. Alexander Scheeline.

Life Science • San Francisco, CA
**STEMPAR**
www.stempar.com
StemPar develops cancer drugs that attack solid tumors by simultaneously disrupting their source of energy and their ability to repair chemotherapy- and radiation-induced DNA damage. StemPar concentrates on the differences in the metabolic pathways of malignant and healthy cells that render cancer cells vulnerable to new modes of attack by exploiting a metabolic pathway that is disrupted in many major types of cancer. StemPar Sciences’ includes research developed by Dr. Paul Hergenrother.

Information Technologies • San Francisco, CA
**TEXT-IE INC.**
Text IE is currently developing products and solutions that leverage the founders’ expertise in the areas of machine learning, natural language processing, information extraction, and text mining. Based on the research of Dr. Dan Roth.

Life Science • Champaign, IL
**VANQUISH ONCOLOGY**
www.vanquishoncology.com
Vanquish Oncology is a drug development company that focuses on targeting molecular defects in specific cancer cells to create personalized oncology therapeutics for unmet or underserved cancer markets. The company focuses on small molecular compounds developed by Dr. Paul Hergenrother, which target cell death across multiple tumor types.

Life Science • Williamsfield, IL
**WILLIAMSFIELD SEED COMPANY**
www.bairdseedcompany.com
Williamsfield Seed Company offers the farming industry wholesale varieties of conventional soybeans and promotes Illinois non-GMO soybean varieties. They have licensed soybean lines developed by Dr. Brian Diers.
Start-Up Acquisitions

**BIODISPLAY**
Licensed in 2000, acquired by Abbott Laboratories in 2001

**BYTEMOBILE**
Licensed in 2001, acquired by Citrix in 2012

**DYNAMIC SEPARATIONS**
Licensed in 2004, acquired by Phoenix Coal in 2006, now named Elgin Mining

**RIVERGLASS**
Licensed in 2004, acquired by ASG Software Solutions in 2011

**TETRAVITAE**
Licensed in 2007, acquired by Eastman Renewable Materials in 2011

**VITAE**
Licensed in 2002, acquired by Origio

**NUVONYX**
Licensed in 1999, acquired by Coherent in 2007

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Xerion Advanced Battery Corporation is exploring a novel method of using nanotechnology to increase ion transport and energy extraction to produce a new electrode architecture called StructurePore. The StructurePore technology has the potential to rapidly recharge electric car and cell phone batteries. The company is exploring military, industrial, and consumer applications. Based on the research of Dr. Paul Braun.