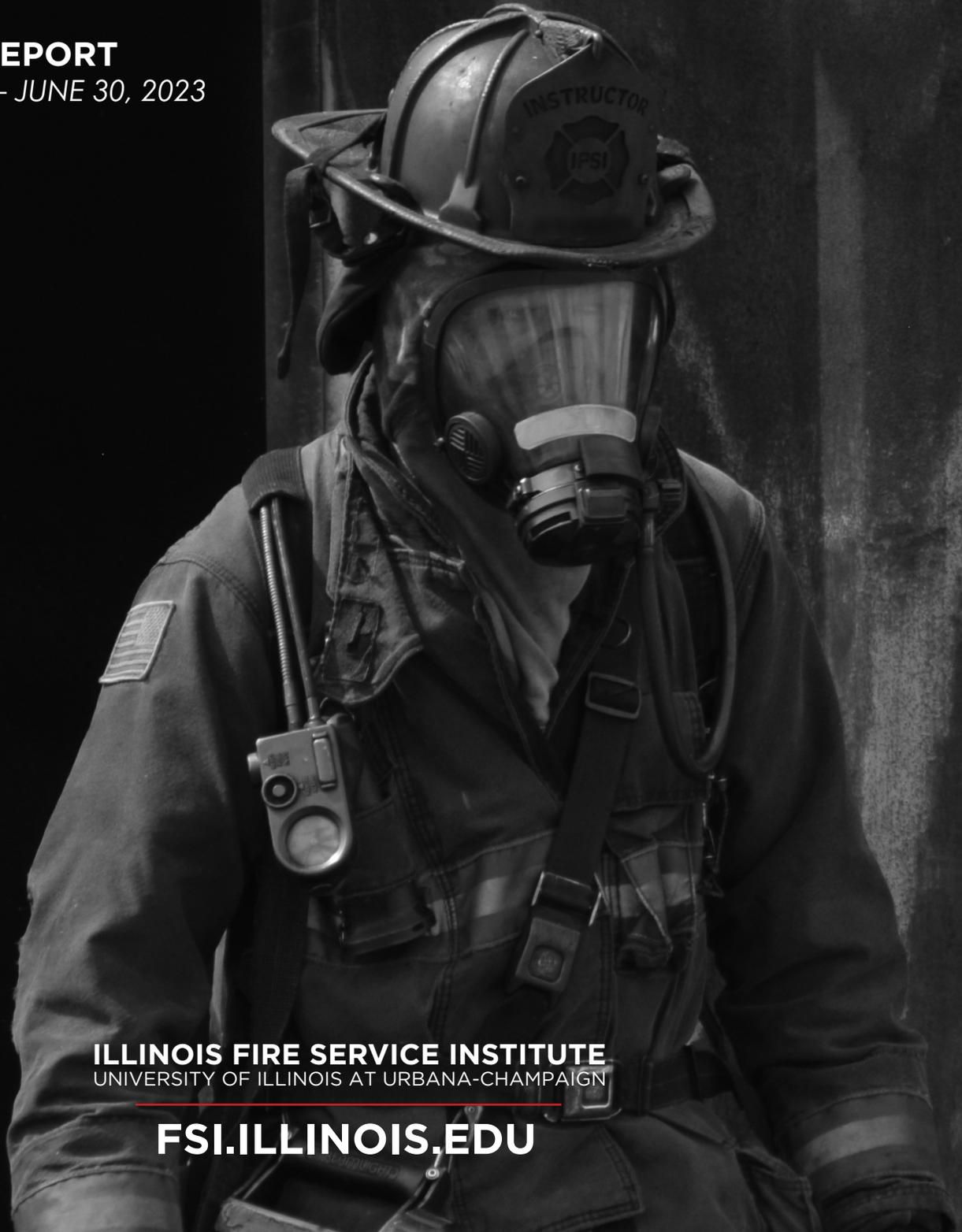




# ON OUR WATCH

**ANNUAL REPORT**  
JULY 1, 2022 – JUNE 30, 2023



**ILLINOIS FIRE SERVICE INSTITUTE**  
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

**FSI.ILLINOIS.EDU**



## MESSAGE FROM THE DIRECTOR

It is my honor to present the 2023 Annual Report of the Illinois Fire Service Institute. I truly am humbled each time we prepare this annual address as I look back on the countless daily, weekly, and monthly successes of the IFSI Team.

In FY23, the Illinois Fire Service Institute (IFSI) proudly served first responders with top-quality training and education opportunities. As anticipated, IFSI returned to traditional delivery numbers following a slight decline due to the impact of the COVID-19 pandemic. I am proud that we served nearly 60,000 constituents in the fiscal year. This total included a 39% increase in the number of student engagement hours.

Beyond classroom deliveries, IFSI support units continued to make a crucial and positive impact on our daily operations. In this fiscal year, the IFSI Library Team saw a 62% increase in the number of reference requests and supported over 500 more Illinois firefighters and departments in their research and material needs. The Curriculum, Testing, and Certification Team added six additional accreditation levels and administered over 6,400 graded exams. I would be remiss if I did not acknowledge that these are only two examples of many that validate the direct impact that IFSI support units have on the fulfillment of our mission.

Our special event programs continue to be premier training opportunities for first responders. In FY23, IFSI offered the 99th Annual Fire College. As we move into the next year, we will launch a 100-year celebration campaign that recognizes our history and traditions since 1925. I am already looking forward to sharing in the FY24 address an overview of the community, campus, and state engagement activities that we will encounter as part of the celebration.

Without question, our many successes are a direct result of the strong team of professionals that represent the Institute. Our dedicated instructors and staff face the many challenges of delivering premier fire service training with true passion and commitment. I could not be prouder to represent this group of talented professionals. I am grateful for their service.

Our programs are unparalleled. Our team and partnerships remain strong. I look forward to the opportunities and challenges that we will embrace in the next year, and I will cherish the moments that we will take to recognize our 100-year history. Thank you for your support of the Illinois Fire Service Institute.

***It is my privilege to support our mission of  
Helping Firefighters Do Their Work Through Training,  
Education, Information, and Research.***

**DIRECTOR, ILLINOIS FIRE SERVICE INSTITUTE**



## FY 2023 BY THE NUMBERS:

|                |  |
|----------------|--|
| <b>56,903</b>  | <i>Total Reach*</i>                          |
| <b>47,928</b>  | <i>Total Students</i>                        |
| <b>1,319</b>   | <i>Courses Offered</i>                       |
| <b>16,547</b>  | <i>Class Hours</i>                           |
| <b>605,466</b> | <i>Student Hours</i>                         |
| <b>8,353</b>   | <i>Agencies Served**</i>                     |
| <b>1,027</b>   | <i>Fire Departments Served</i>               |
| <b>101/102</b> | <i>Illinois Counties Served</i>              |
| <b>313</b>     | <i>Unique Delivery Locations in Illinois</i> |

\* Total reach includes outreach activities where individuals received training, education, or information from members of the IFSI Team, but were not registered for a specific class or training activity. Outreach activities include presentations, conferences, workshops, webinars, and national stage deliveries.

\*\* Other agencies served include: education, EMS, government, health, police and industry.

### AFFILIATE SUPPORT

Our many strategic affiliations allow us to share knowledge and resources with leading educators, researchers, corporations, professional associations, and other organizations. In addition to those listed, we are grateful for the support received through fire service vendors and suppliers who contribute to the fulfillment of our mission.

#### IFSI AFFILIATES:

- Office of the Illinois State Fire Marshal
- Mutual Aid Box Alarm System - MABAS
- Illinois Fire Chiefs Association
- Illinois Firefighter's Association
- Illinois Association of Fire Protection Districts
- Associated Fire Fighters of Illinois
- Illinois Professional Firefighters Association
- Illinois Society of Fire Service Instructors
- Illinois Fire Safety Alliance
- Illinois Fire Inspectors Association
- Northern Illinois Alliance of Fire Protection Districts
- Illinois Chapter International Association of Arson Investigators
- State of Illinois Fire Caucus
- Underwriters Laboratory
- National Institute for Occupational Safety and Health
- Illinois Department of Natural Resources
- Illinois Propane Education and Research Council

### IFSI FUNDING SOURCES

Total Annual Operating Budget  
**\$14,370,000**

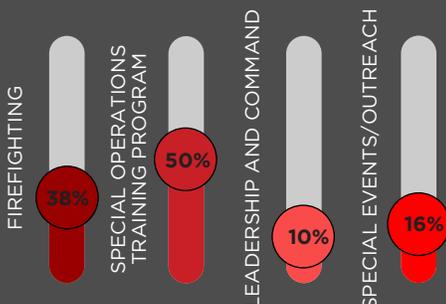
Gifts In Kind Support  
**\$1,400,000**



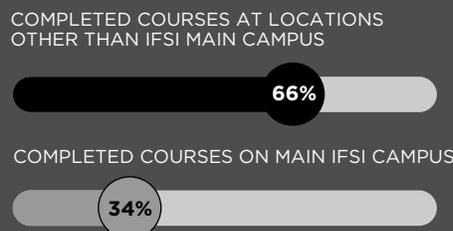
|                  |   |
|------------------|---|
| <b>\$4.27 M</b>  | Fire Prevention Fund (General) – 30%    |
| <b>\$850,000</b> | Fire Prevention Fund (Cornerstone) – 6% |
| <b>\$4 M</b>     | Cost Recovery (Student Fees) – 28%      |
| <b>\$2.6 M</b>   | Grants (Federal) – 18%                  |
| <b>\$1.3 M</b>   | Grants (Research) – 9%                  |
| <b>\$780,000</b> | Gifts – 5%                              |
| <b>\$280,000</b> | Endowments – 2%                         |
| <b>\$280,000</b> | Indirect Cost Recovery – 2%             |

## STATS AT A GLANCE

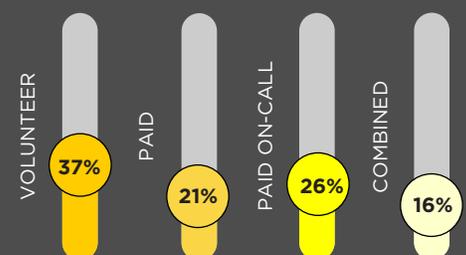
### Enrollment Highlights



### Registrations by Location



### Enrollment by Career Type



## IFSI RESEARCH PROGRAM

IFSI Research welcomed two new members to the team to help continue and grow firefighter health and safety research efforts. Jason Rennert was hired as a Research Project Manager and Neda Seyedsadjadi as a Research Scientist.

The current laboratory space began a transformation to accommodate genomic, epigenomic, proteomic, and metabolomic research to further identify the effects of carcinogen exposure on cancer progression and cardiovascular events.

### ONGOING RESEARCH PROJECTS:

- *Fire Safety Preparedness for Individuals who use Wheelchairs and Scooters Living with Spinal Cord Injury.* Led by Dr. Laura Rice from Kinesiology & Community Health, funded by the Craig H. Neilsen Foundation.
- *Effect of PFAS on Firefighters' Health.* Research was led by Dr. Joseph Irudayaraj, Professor of Bioengineering and Associate Director of Cancer Center at UIUC, funded by UIUC Office of Research. How PFAS can affect firefighter's health.
- *Firefighter Immersive Learning Environment (FILE).* Led by the National Center for Supercomputing Applications, funded by the Fire Protection Research Foundation and North American Fire Training Directors. Establish a road map for future decision making on what type of immersive training can be most valuable, effective, adaptable and affordable for firefighters.
- *Augmented 360 Video for Remote Incident Command in Firefighter Operation.* Project was led by Dr. Klara Nahrstedt from UIUC Department of Computer Science along with Dr. Zhisheng Yan from George Mason University. Design and evaluate using augmented 360 video to enable the panoramic visual cognition for incident command in firefighter operation.
- *Development of Contamination Resistance as a Measure for Firefighter Protective Clothing.* Led by Dr. Bryan Ormond at North Carolina State University. Evaluating PPE effectiveness in the absence of PFAS.
- *Operational Efficiency Risk Assessment Modeling.* Led by Dr. Zahra Mohaghegh from UIUC Department of Nuclear, Plasma, and Radiological Engineering. Quantify the uncertainties associated with the Agent-Based Modeling fire brigade performance.

### Peer Reviewed Publications:

1. Evaluating exposure to VOCs and naphthalene for firefighters wearing different PPE configurations through measures in air, exhaled breath, and urine.

<https://www.mdpi.com/1660-4601/20/12/6057>

A complete list of past publications can be found at <https://www.fsi.illinois.edu/research/publications.cfm>

## INTERNATIONAL PROGRAM HIGHLIGHTS

IFSI Library outreach services has built a viable global community of **850** individuals from **209** organizations. IFSI International Programs answered 7,229 international requests in FY2023. Since April 2020, the International Program has organized 30 lecture series on Library and Information Science, fire safety, Chinese arts, and visiting scholars' research via Zoom with **4,852** participants throughout the world. Since 2005, the initiatives Chinese Librarian Scholarly Exchange Program (CLSEP) and the Visiting Scholar Program have been highly successful, with CLSEP receiving **433** librarians from **100** organizations since 2005, and the Visiting Scholar Program hosting **163** scholars from **88** institutions in China, Brazil, South Korea, and the Netherlands since 2008.

### FY2023 Visiting Scholars, International Firefighters, and First Responders

- **11** visiting scholars arrived in Champaign-Urbana in FY2023. They represented a variety of institutions with diverse research focuses.
- **8** South Korean firefighters completed the Smoke Divers and Responder Intervention Team Rescue Technician courses.
- **2** Brazilian fire investigators completed the Fire Investigator course.



## LIBRARY

The IFSI Library is the only library in the state dedicated to fire and emergency services and is the third largest fire and emergency services library in the United States. The IFSI Library provides services in the key areas of reference, circulation, and interlibrary loans.

### FY2023 HIGHLIGHTS:

- **404** items were added to the collection, including **329** general donations
- **5,596** items were loaned, including **397** through interlibrary loans
- The online subject guides (LibGuides) were viewed **30,812** times
- **23** user training workshops were delivered to **360** patrons
- **2,280** training and outreach emails were sent to **380** Illinois fire departments

### OPERATIONAL ACHIEVEMENTS

Achievements in key areas include a record high **12,285** reference requests in FY2023, an increase from 7,558 in FY22. These reference requests include:

- **2,833** from Illinois firefighters and fire departments
- **1,838** from IFSI instructors, staff and students
- **254** UIUC staff and students
- **144** from the IFSI Curriculum Department

### LIBRARY GRANTS COMPLETED:

Two grants were completed in FY23: "Experience-Based Knowledge Management Initiatives to Support Illinois Firefighters' Dynamic Needs in Response to the COVID-19 Pandemic" through the IMLS American Rescue Plan program and "Children's Fire Safety Literacy Reading and Discussion Program" through the American Library Association National Endowment for the Humanities American Rescue Plan: Humanities Grantmaking Program.

*The IFSI Library maintains the Illinois Firefighter Medal of Honor and Medal of Valor Database and the Illinois Firefighter Line of Duty Death Database (IFLODD).*

- The Illinois Firefighter Medal of Honor and Medal of Valor Database includes **301** total recipients, **114** total incident summaries, **276** IFSI student recipients and **42** IFSI instructor recipients.
- Since May 2007, IFLODD has received **167,777** database hits and holds **912** firefighter records covering over 160 years. The records include **713** total incident summaries, **1,537** total images, and **14** total oral history interviews.

*The Illinois Fire Service Archives and Institutional Repository includes materials about Illinois fire departments, relevant COVID-19 information and documents, IFSI operational documents from various years, promotional materials, and images.*

- In FY2023, the Library had **7,809** reference interactions related to the IFSI Archives.

## CURRICULUM, TESTING, AND CERTIFICATION

The Illinois Fire Service Institute continues to offer the highest quality in training and education. In FY23, evaluation methods were audited and reviewed through a third-party process. IFSI maintains accreditation with the National Board on Fire Service Professional Qualifications (Pro Board) and International Fire Service Accreditation Congress (IFSAC). IFSI continues to expand national certification opportunities for our students.



### Curriculum

- Supported the update of 14 existing courses and the development of 10 new courses, including:
  - ♦ Chief Fire Officer Blended/NFPA 1021 Fire Officer III and IV
  - ♦ Wilderness Search and Rescue Awareness
  - ♦ Instructor III
- IFSI delivered 108 courses that awarded EMS Continuing Education Units (CEUs)

### Testing

- 7 Test Bank validations
- All onsite exam deliveries administered via computer based testing (CBT) – piloting the CBT testing option for offsite deliveries
- Maintained, created, and verified reliability/validity of the 40 exams which hold national and Illinois state certification
- 6,453 graded exams

### Certification

- 39 Pro Board and 15 IFSAC approved levels
- Issued 3,318 Pro Board certifications and 1,013 IFSAC certifications



## PROGRAM STATS

**610**  
 CLASSES DELIVERED

**83,290**  
 STUDENT HOURS

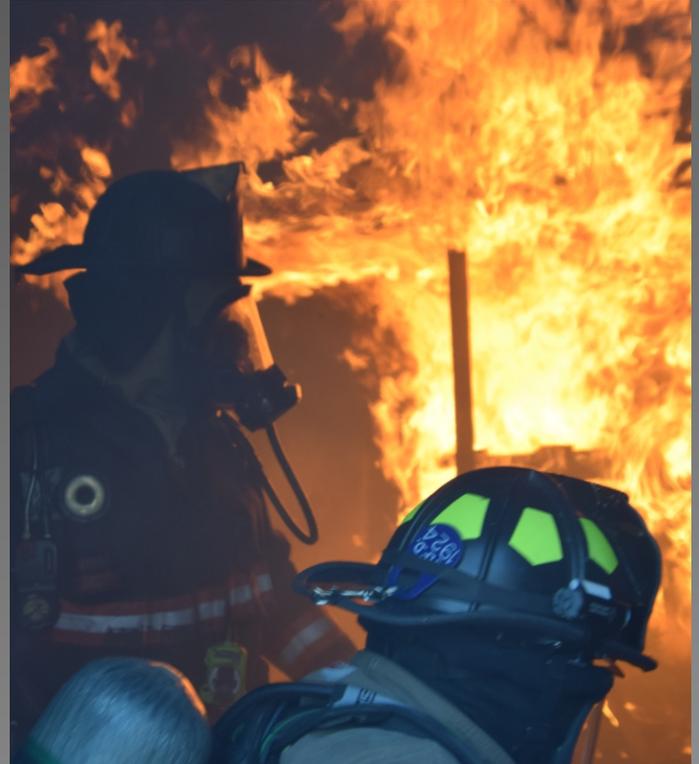
**12,082**  
 STUDENTS REACHED

The Cornerstone Program supports fundamental and essential skills training for fire departments and mutual aid organizations throughout the state. Training is coordinated through eight IFSI Regional Representatives. Courses are funded through the Office of the Illinois State Fire Marshal and available at no cost to students or fire departments.

## DELIVERY BY REGION

| Region        | Classes    | Students      | Student Hours |
|---------------|------------|---------------|---------------|
| Northeast     | 57         | 979           | 6,397         |
| Cook County   | 28         | 832           | 9,328         |
| North Central | 58         | 1,485         | 12,628        |
| Northwest     | 55         | 807           | 5,085         |
| Central       | 88         | 1,549         | 11,218        |
| East Central  | 88         | 2,041         | 13,274        |
| Southwest     | 171        | 2,791         | 13,131        |
| Southern      | 53         | 896           | 6,155         |
| Other*        | 12         | 702           | 6,074         |
| <b>TOTAL</b>  | <b>610</b> | <b>12,082</b> | <b>83,290</b> |

\*These deliveries supported multiple regions.



## LEADERSHIP AND COMMAND PROGRAMS

## NATIONAL INCIDENT MANAGEMENT SYSTEM

**2,183 Students**    **106 Classes**    **27,916 Hours**

The National Incident Management System (NIMS) Program offers training in incident management to response organizations throughout the State of Illinois. This includes training in Active Shooter Incident Management (ASIM) and School Safety and Violent Event Incident Management (SSAVEIM).

## LEADERSHIP DEVELOPMENT AND DECISION MAKING

**318 Students**    **31 Classes**    **5,240 Hours**

The Leadership Development and Decision Making (LDDM) Program offers premier training and education courses that have consistent themes, priorities, and lines of education in order to institutionalize high quality leadership in the fire service.

## RESILIENCY PROJECT

**192 Students**    **9 Classes**    **646 Hours**

Resiliency training provides first responders with the necessary tools to remain resilient to the stressors that come with the job as well as stress from off the job. Resiliency training is infused in the curriculum of multiple IFSI courses and also available as a stand alone delivery.

## FIREFIGHTING PROGRAMS

The IFSI Firefighting Program offers hands-on training opportunities for first responders. Courses provide students with a realistic learning experience.

### FIREFIGHTING STATS

|  | # Students | # Hours |
|--|------------|---------|
| Acquired Structure (House) Burn                        | 832        | 7,596   |
| Advanced Technician Firefighter / NFPA FF II           | 82         | 3,280   |
| Basic Firefighter / NFPA FF I Academy                  | 119        | 44,030  |
| Basic Operations Firefighter / NFPA FF I Blended       | 429        | 118,833 |
| Basic Firefighter / NFPA FF I Online (Mods A, B, C)    | 145        | 10,150  |
| Courage to be Safe                                     | 180        | 713     |
| Driver/Operator Courses                                | 2,315      | 19,510  |
| Engine Company Operations                              | 398        | 3,134   |
| Fire Attack and Suppression Techniques (FAST)          | 32         | 1,600   |
| Fireground Command Officer School                      | 24         | 960     |
| Fireground Company Officer School                      | 125        | 4,672   |
| General Firefighting Courses                           | 3,021      | 14,630  |
| Industrial Firefighting                                | 1,984      | 1,776   |
| Investigation/Prevention                               | 680        | 5,858   |
| Light and Fight  | 337        | 2,696   |
| Oil and Gas  | 1,440      | 5,606   |
| Smoke Divers (Advanced Breathing Apparatus Specialist) | 62         | 1,536   |
| Truck Company Operations                               | 313        | 2,484   |
| Wildland Firefighting                                  | 285        | 4,876   |

## SPECIAL OPERATIONS TRAINING PROGRAM

The Illinois Fire Service Institute delivers technical rescue awareness and hazardous materials training to first responders. Courses offer immersive training experiences that challenge even the most experienced students. IFSI SOTP is at the national forefront of technical rescue and hazardous material training programs.

### SOTP STATS

|                                   | # Students | # Hours |
|-----------------------------------|------------|---------|
| Agriculture                       | 565        | 3,881   |
| Confined Space                    | 211        | 8,389   |
| Hazardous Materials               | 22,450     | 52,340  |
| Responder Intervention Team (RIT) | 476        | 9,766   |
| Rope Rescue                       | 436        | 12,861  |
| Structural Collapse               | 184        | 7,244   |
| Technical Rescue                  | 283        | 1,488   |
| Trench Rescue                     | 227        | 7,920   |
| Vehicular Rescue                  | 2,422      | 28,398  |
| Wilderness Search and Rescue      | 22         | 264     |



The Illinois Fire Service Institute (IFSI) is the statutory State Fire Academy for Illinois. It serves as the oldest continuous fire training institution in the United States. Since 1925, first responders from across the state and world have relied on IFSI to deliver hands-on, innovative, and top-quality training, education, and research.

## LEADERSHIP TEAM

### Jim Keiken

Director  
(217) 300-4275 | [jkeiken@illinois.edu](mailto:jkeiken@illinois.edu)

### Heather Moore

Deputy Director  
(217) 244-4168 | [hmoore@illinois.edu](mailto:hmoore@illinois.edu)

### James Moore

Deputy Director  
(217) 300-3463 | [jpmoore1@illinois.edu](mailto:jpmoore1@illinois.edu)

### Sheri Ellenberger

Associate Director for Finance and Business Operations  
(217) 300-5831 | [ellenber@illinois.edu](mailto:ellenber@illinois.edu)

### Tom Shubert

Associate Director for Firefighting Programs  
(217) 300-3800 | [tshubert@illinois.edu](mailto:tshubert@illinois.edu)

### Jill Kraft

Associate Director for Strategic Communications and Marketing  
(217) 300-6036 | [jillks@illinois.edu](mailto:jillks@illinois.edu)

### Farzaneh Masoud

Director of Research  
(217) 300-8493 | [fmasoud2@illinois.edu](mailto:fmasoud2@illinois.edu)



# OUR MISSION

*Helping Firefighters Do Their Work Through  
Training, Education, Information, and Research.*

## ILLINOIS FIRE SERVICE INSTITUTE

11 GERTY DRIVE  
CHAMPAIGN, ILLINOIS 61820  
217.333.3800

[FSI.ILLINOIS.EDU](http://FSI.ILLINOIS.EDU)



IFSI MARKETING: [FSI-MARKETING@ILLINOIS.EDU](mailto:FSI-MARKETING@ILLINOIS.EDU)  
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