A MESSAGE FROM DIRECTOR MORTENSON

It is my honor to present the 2020 Annual Report of the Illinois Fire Service Institute at the University of Illinois at Urbana-Champaign. After eight years of preparing these letters, I still find myself reflective on the many changes IFSI encounters each year. Undoubtedly, FY20 was no exception. Despite unprecedented and challenging times due to the COVID-19 global pandemic, the Illinois Fire Service Institute remained steadfast to the fulfillment of our Mission.

In the first three quarters of FY20, the Illinois Fire Service Institute (IFSI) delivered training and education to 53,195 individuals. IFSI was forced to postpone or cancel virtually all training deliveries in the fourth quarter (April, May, June). Despite this reality, internal forecast models indicated that we were on track to train or educate approximately 67,000 students. Even with these significant schedule adjustments, the Cornerstone Program saw a 14% increase in the number of students receiving training through the program and a 13% increase in the number of fire departments reached. The Special Operations Training Program supported 298 more classes. We increased student attendance by 42% in our National Fire Academy course deliveries, and the IFSI Resiliency Project brought awareness level training to 462 more students in the fiscal year. These figures are a testament to our commitment to provide a full spectrum of relevant training opportunities for the Illinois fire service.

Our presence on the national and international stage also grew in FY20. IFSI was regularly featured in regional, state and national media outlets, to include multiple radio, television, podcast, and national print media channels. Segment topics included IFSI Research efforts, special events, IFSI mission, agriculture rescue awareness, veterans support programs, new training programs and resources, and IFSI technical rescue training programs. Additionally, we successfully created, secured, and managed multiple bids to deliver training at national fire service trade show conventions and conferences. The conferences included Fire Department Instructors Conference (FDIC), Intershutz USA, Firehouse, Industrial Fire World, and Fire-Rescue International (FRI). We look forward to continuing these developing relationships in the next year.

Without question, our many successes are a direct result of the strong team of professionals that represent the Institute. Our dedicated instructors, staff, and even the students we serve faced the many challenges in FY20 with tenacity, passion, and patience. I could not be prouder to represent this group of talented professionals. I am grateful for their commitment and 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. Thank you for your support of the Illinois Fire Service Institute. As I have stated each year, it is my privilege to support our Mission of Helping Firefighters Do Their Work Through Training, Education, Information, and Research.

Royal P. Mortenson
Director, Illinois Fire Service Institute

ILLINOIS FIRE SERVICE INSTITUTE
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

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, the nation, and the world have relied on IFSI to deliver hands-on, innovative, and top-quality training, education, and research.

SOCIAL MEDIA ENGAGEMENT

Facebook – Increased the number of Facebook followers to over 21,000 in FY20. Despite the uncontrollable postponement of training activities and special events due to COVID-19, the Facebook page increased page likes by 13% and page followers by 19% in FY20.

Twitter – Received 133,843 impressions with 4,710 profile visits. Averaged 367 impressions per day across the fiscal year. This was an 11% increase from the previous fiscal year.

Instagram – Averaged 3 postings per week highlighting course and program activities delivered across the state. Grew account followers by 30% compared to the previous fiscal year.

LinkedIn – Maintained active presence on the IFSI LinkedIn account with nearly 500 followers. Closed out FY20 with a 30% average monthly growth rate on page followers.

YouTube – This medium saw a 36% increase in video views in FY20.
In response to COVID-19, IFSI launched the Facebook Forum in March 2020. The forum was created to offer live, virtual training opportunities through the IFSI Facebook account, allowing for real-time engagement from viewers. Training topics ranged from trending COVID-19 issues to simulated live fire and hands-on essential firefighting skills. Forum training deliveries were shared on all IFSI social media channels following the live broadcasts.

Forum participants were from 29 states and 26 countries.

FY2020 FACEBOOK FORUM IMPACT: March – June 2020
- 26 videos posted in the Forum reaching 289,700 video views
- 8,356 video views of posted forum training on the IFSI Youtube channel
- Video views on the page increased 295% compared to the previous three months
- Participants included residents from Illinois, Iowa, Indiana, Michigan, Wisconsin, Pennsylvania, Alaska, Hawaii, Florida, Arizona, Montana, New York, Alabama, New Jersey, Texas, Virginia, Ohio, California, Utah, North Carolina, Kentucky, Missouri, Tennessee, Arizona, Minnesota, Georgia, Nebraska, Oregon, Connecticut
- International Audience Engagement/Followers: Mexico, South Africa, Netherlands, Canada, Cambodia, Chile, Madagascar, Argentina, Turkey, Ukraine, Guatemala, UK, Colombia, Namibia, Peru, Germany, Australia, Puerto Rico, Myanmar, Japan, Sweden, Belgium, Cuba, Sri Lanka, Trinidad, France
In FY2020, IFSI was reaccredited by The National Board of Fire Service Professional Qualifications. IFSI issued 2,535 Pro Board certifications and 793 IFSAC certifications. IFSI has 32 Pro Board approved levels and 8 IFSAC approved levels. The IFSI Curriculum and Testing staff scored 4,650 total IFSI exams and administered 41 OSFM state exams. The team has supported the update of 12 IFSI courses and the development of 1 new course. 91 IFSI courses award EMS Continuing Education Units (CEUs). Test validity and relevancy is critical to our programs. As a result, the testing office validated 14 test banks last year, ensuring we are testing the knowledge that the job requires.

**CURRICULUM**

The Illinois Fire Service Institute continues to offer the highest quality in training and education. Evaluation methods were audited and reviewed once again this year through a third-party process. IFSI has maintained accreditation with the National Board on Fire Service Professional Qualifications (Pro Board) and International Fire Service Accreditation Congress (IFSAC). IFSI continued to expand national certification opportunities for our students.

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**AFFILIATION 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 fulfilling our mission.

**IFSI AFFILIATES:**

- Office of the Illinois State Fire Marshal
- Mutual Aid Box Alarm System
- Illinois Fire Chiefs Association
- Illinois Firefighters 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

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

| AGRICULTURE | 785 | 48 |
| DRIVER/OPERATOR | 67 | 416 |
| FIRE PREVENTION | 1,696 | 6,768 |
| FIREFIGHTING (see course details below) | 2,249 | 93,298 |
| INVESTIGATION | 518 | 15,472 |
| OFFICER | 1,542 | 42,088 |
| OIL & GAS | 1,046 | 3,865 |
| VEHICULAR | 260 | 9,616 |
| WILDLAND FIRE FIGHTING | 128 | 1,867 |
| **TOTALS** | **8,291** | **173,438** |

FIREFIGHTING COURSES

<table>
<thead>
<tr>
<th>Course</th>
<th># Students</th>
<th># Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advanced Apparatus Breathing Specialist (Smoke Divers)</td>
<td>56</td>
<td>1,344</td>
</tr>
<tr>
<td>Advanced Technician Firefighter / NFPA FF II</td>
<td>22</td>
<td>880</td>
</tr>
<tr>
<td>ARFF Apparatus Driver/Operator</td>
<td>22</td>
<td>528</td>
</tr>
<tr>
<td>Basic Firefighter / NFPA FF I Academy</td>
<td>64</td>
<td>17,920</td>
</tr>
<tr>
<td>Basic Firefighter / NFPA FF I Online</td>
<td>60</td>
<td>3,819</td>
</tr>
<tr>
<td>Basic Operations Firefighter / NFPA FF I Blended</td>
<td>171</td>
<td>47,880</td>
</tr>
<tr>
<td>Basic Pumper Operations</td>
<td>60</td>
<td>240</td>
</tr>
<tr>
<td>Engine Company Operations</td>
<td>58</td>
<td>1,384</td>
</tr>
<tr>
<td>Fire Apparatus Engineer</td>
<td>75</td>
<td>2,880</td>
</tr>
<tr>
<td>Fire Attack and Suppression Techniques (FAST)</td>
<td>31</td>
<td>1,550</td>
</tr>
<tr>
<td>Fire Service Vehicle Operator</td>
<td>216</td>
<td>1,104</td>
</tr>
<tr>
<td>Mobile Water Supply Apparatus Operator</td>
<td>20</td>
<td>320</td>
</tr>
<tr>
<td>Responder Intervention Team Rescue Technician</td>
<td>120</td>
<td>4,800</td>
</tr>
<tr>
<td>Search Techniques for the Fire Ground</td>
<td>27</td>
<td>648</td>
</tr>
<tr>
<td>Special Events</td>
<td>789</td>
<td>5,998</td>
</tr>
<tr>
<td>Truck Company Operations</td>
<td>59</td>
<td>1,408</td>
</tr>
<tr>
<td>Traffic Incident Management Awareness</td>
<td>218</td>
<td>155</td>
</tr>
</tbody>
</table>

INDUSTRY

| COURSES | 24 | STUDENTS | 1,723 | HOURS | 6,705 |

SPECIAL OPERATIONS TRAINING PROGRAM
The Illinois Fire Service Institute Special Operations Training Program (SOTP) 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 awareness and hazardous material training programs.

<table>
<thead>
<tr>
<th>Course</th>
<th># Students</th>
<th># Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confined Space</td>
<td>227</td>
<td>7,430</td>
</tr>
<tr>
<td>Hazardous Materials (IDOC)</td>
<td>16,643</td>
<td>93,438</td>
</tr>
<tr>
<td>Hazardous Materials (includes IEMA)</td>
<td>9,500</td>
<td>42,800</td>
</tr>
<tr>
<td>Rope Rescue</td>
<td>471</td>
<td>13,084</td>
</tr>
<tr>
<td>Structural Collapse</td>
<td>106</td>
<td>2,943</td>
</tr>
<tr>
<td>Technical Rescue</td>
<td>544</td>
<td>3,937</td>
</tr>
<tr>
<td>Trench Rescue</td>
<td>107</td>
<td>4,064</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>27,598</strong></td>
<td><strong>167,696</strong></td>
</tr>
</tbody>
</table>

NATIONAL INCIDENT MANAGEMENT SYSTEM
The National Incident Management (NIMS) Program offers training in incident management to response organizations throughout the State of Illinois. In FY20, the NIMS/ICS Program delivered 40 classes to 987 students in 17 training locations.

LEADERSHIP DEVELOPMENT & DECISION MAKING
The Leadership Development and Decision Making (LDDM) Program is a premier development/decision-making training and education course that has consistent themes, priorities, and lines of education in order to institutionalize the highest-quality leadership in the fire service. In FY2020, the LDDM program impacted 522 students with 2,627 class hours and 25 different course offerings.

RESILIENCY TRAINING FOR FIRST RESPONDERS
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. The First Responder Resiliency and Mental Health Awareness Project is infused in the curriculum of 34 IFSI courses. This training seeks to remove the stigma surrounding the discussion of mental health, trauma, and suicide. Resiliency training reached 563 students through 26 courses for a total of 2,416 student hours in FY2020.

Cornerstone Training

The Cornerstone Program supports the delivery of essential skills training to local fire departments, MABAS Divisions and Mutual Aid Associations 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. Of the 916 Illinois fire departments served in 2020, 824 of those departments received grant funded Cornerstone training.
In May 2020, IFSI launched the Preliminary Exposure Reduction Project in collaboration with Office of the State Fire Marshal and MABAS-IL, based on research from IFSI, NIOSH, UL FSRI and Skidmore College:

- 1648 decon buckets delivered to Illinois departments
- 2901 firefighters completed online training

IFSI Research efforts published in multiple high impact academic journals to include:

- Journal of Occupational and Environmental Hygiene (JOEH),
- Journal of Thermal Science and Engineering Applications (JTSEA),
- National Institute of Standards and Technology

List of publications can be found at https://www.fsi.illinois.edu/research/2018.cfm

Completed data collection in the following studies:

- IFSI PPE Interface Mannequin testing
- Underwriters Laboratory (UL) HVAC Gas Burner Project
- North Carolina State University project focusing on heat strain prediction project
- NC State University project focusing on metabolic cost of firefighting

Ongoing Data Collection:

- IFSI Personal Protective Equipment (PPE) Interface project in collaboration with NIOSH, UL Firefighter Safety Research Institute, and Skidmore College
- UL FSRI study of Fire Service Residential Home Size-Up and Search and Rescue Operations, laser-based measurements of hydrogen cyanide in real-time

In FY2020, new collaborations were initiated and proposals generated with partners to include:

- University of Illinois at Urbana-Champaign
  - Chez Center for Wounded Veterans
  - Department of Kinesiology
  - Department of Nuclear Engineering
  - National Center for Supercomputing Applications (NCSA)
- Colorado State University
- National Institute for Occupational Safety and Health
- National Personal Protective Technology Laboratory (NIOSH NPPTL)
- University of Cincinnati
- Oregon State University
- National Development Research institute (NDRI)
- Los Angeles Fire Department
- Rice University
- NASA, Minerva Work Solutions
- National Fire Protection Research Foundation (NFPR)
- Patient-Center Outcomes Research Institute (PCORI)
- Rush Hospital, Chicago, IL
- San Diego Veterans Hospital
- VA Illiana Healthcare System, Danville, IL
- University of Central Florida
- Northwestern University

IFSI Research welcomed Dr. Farzaneh Masoud as Director of Research Programs on Nov 1, 2019.
LIBRARY

The IFSI Library is the only library in the state dedicated to fire and emergency services. It is also the third largest fire and emergency services library in the United States. The library holdings included 74,594 titles as of June 2020.

FY2020 REFERENCE REQUESTS:

The IFSI Library Team answered 3,321 reference requests in total, including 106 in-depth, long-term reference requests
- 1,242 reference requests answered for IFSI staff and students
- 141 reference requests related to the IFSI Curriculum Department
- 133 reference requests dedicated to international partners’ research
- 744 reference requests from firefighters/fire departments
- 303 reference requests answered for UIUC staff and students

FY2020 HIGHLIGHTS:

- The Library added 340 items to the collection
- Received 585 general donations
- Added 41 borrowers
- Loaned 1,345 items
- Received 27,806 views of online subject guides (LibGuides)
- Provided 253 items of IFSI Library materials to the Peoria Fire Academy
- Implemented 412 user training workshops; 382 fire departments reached with training materials via email
- Provided 382 Illinois fire departments with IFSI Library 2020 Powerpoint presentation
- Provided 6,383 archive reference interactions

INTERNATIONAL PROGRAM HIGHLIGHTS

- IFSI hosted the Library Scholarly Exchange Program for the 16th consecutive year. As of FY2020, the Librarian Scholarly Exchange Program had received 421 librarians from 145 organizations. The Visiting Scholar Program hosted 140 scholars from 76 institutions.
- The International Programs team coordinated and hosted 15 virtual scholarly activities during the COVID-19 response period.
- Chinese Librarians Scholarly Exchange Program (July 2019): 41 librarians participated in the 2019 program.
- IFSI Hazardous Materials Technician Training Program (October 2019): 2 fire officers from the Hong Kong Fire Services Department joined the training program. Since 2008, a total of 60 Hong Kong fire officers have been trained at IFSI.
- International Visit (October 2019): Head Librarian Dr. Lian Ruan visited Jiangsu University Library in Zhenjiang and attended the International Symposium on Library Strategic Planning and Discipline Development with other librarians from the United States.

In FY20, the International Program and the Library team submitted publications to the Chinese American Librarians Association (CALA), Shanghai International Library Forum, and DH 2020 (Shanghai) – Benevolence and Excellence: Digital Humanities and Chinese Culture Conference. These publications were posted and shared through multiple national and international media channels.

OUR MISSION:
HELPING FIREFIGHTERS DO THEIR WORK THROUGH TRAINING, EDUCATION, INFORMATION, AND RESEARCH.

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 staff also supports continued exhibitions in the IFSI Firefighter Memorial Hall. In FY2020, 5 former instructors were added to the memorial exhibit.

- 119,742 IFLODD database hits (since 5/2007)
- 903 IFLODD firefighter records
- 809 firefighters with incident summaries
- 1524 images and 14 total oral history interviews

Created the COVID-19 Archives Collection to preserve important documents related to the COVID-19 pandemic, including collections for IFSI and the Illinois fire service and comprehensive IFLODD records for 3 Illinois firefighter line of duty deaths related to COVID-19.

Worked with the Illinois Digital Environment for Access to Learning and Scholarship (IDEALS) to make key IFSI documents widely available to firefighters and the general public, with over 183,278 downloads since 2006.
Helping Firefighters Do Their Work Through Training, Education, Information, and Research.

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