

# Office of the Associate Dean for Undergraduate Education

Esfan Haghverdi  
Executive Associate Dean for Undergraduate Education

Luddy School of Informatics, Computing, and Engineering  
Indiana University Bloomington

December 16, 2019

# SICE History

- **2000**, School of Informatics
- **2005**, School of Informatics  
(CS joined the school)
- **2009**, School of Informatics and Computing
- **2013**, School of Informatics and Computing  
(SLIS joined the school)
- **2015**, Intelligent Systems Engineering Department and Program were approved
- **2017**, School of Informatics, Computing, and Engineering
- **2019**, Luddy School of Informatics, Computing, and Engineering

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- Serve/Teach IT (Una Thacker)

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- Career Services (Jodie Sackley)

<b>Year</b>	<b>CS</b>	<b>Informatics</b>
2015	13%	8%
2016	13%	10%
2017	17%	9%
2018	12%	13%

# Structure of the Office (2019)

- Computing Education Outreach (Michele Roberts)

Recurring events:

- Flipping the Switch (teacher focus)
- Infosys pathfinders (teacher focus)
- Programming contest (at schools' requests) to help students prepare for AP CS A (Java), Cybersecurity competition, mobile app contests

One high school visit every two weeks, Luddy Opportunities slide deck, recruitment info.

# Structure of the Office (2019)

- Student Engagement and Success (Tiana Iruoje)
  - LLC
  - Student orgs
  - International experiences
  - Special programming
  - TEACH-IT Internship for seniors from BHS (with Una)
  - Engagement with MCCSC schools (with Una)
  - Peer mentoring
  - Free tutoring

# Structure of the Office (2019)

- Undergraduate Recruiting (Natalie Edwards)
  - Recruiting visits
  - Partnerships with HS, FIRST Robotics, etc.
  - Summer camps

## Fall 2019

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September 11	Crown Point HS College Fair
September 12	Monroe County College Fair
September 16	Southern Indiana College Fair-New Albany HS
September 16-17	CS Teacher Conference "Flipping the Switch"
September 17	Columbus College Fair
September 19	Southeastern Indiana College Fair- Hanover
September 23	Indy Westside College Fair - Ben Davis
September 24	NACAC Indy College Fair
September 24	Hamilton County College Fair Hamilton SE HS
September 26	PIKE High School College Fair



- October 1 Elkhart Central College Fair
- October 1 John Adams HS Presentation
- October 1 St. Joseph County College Fair
- October 6 Evansville Area HS College Fair
- October 9 Seymour HS College Fair
- October 24 Evansville New Tech Institute HS visit to Luddy
- October 24 Hoosier Hills College and Career Pathway

November 7	Life Sciences Fair - Bloomington
November 8	Brown County HS presentations
November 14-15	Indiana School Counselor Association Conference-Booth
November 18	Reach IU Event - Bloomington South HS
November 19	Reach IU Event - Indy - Pike HS
November 22	Indiana Business Education Association- Booth

## Spring 2020

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February	Hamilton Southeastern HS Presentation to CS classes
February	Pike HS Presentation to Girls Who Code Club
February	Bloomington South and North Presentations to CS Classes
February	Brown County HS Presentations to CS and Engineering classes
February 9-11	Hoosier Association of Science Teachers Conference Indy- Booth
February 25	Providence HS (Clarksville, IN) STEM College Fair
March 3	Lake Central College Fair
March 4	Valparaiso College Fair
March 5	Hendricks County College Fair

March 7-8	Bloomington FIRST Robotics District Competition-BS
March 9	Indy Southside College Fair - UIndy
March 10	Northeast Indy College Fair - Lawrence North
March 11	Greater Indy Northside Fair - Westfield
March 14-15	St. Joseph FIRST Robotics District Competition-Penn High
March 20-21	Columbus HS FIRST Robotics District Competition
March 27-28	Perry Meridian FIRST Robotics District Competition - Perry
April 4-5	FIRST Robotics State Competition - Lafayette Jeff HS

# Structure of the Office (2019)

- Serve/Teach IT (Una Thacker)
  - TEACH-IT Internship for seniors from BHS (with Tiana)
  - Engagement with MCCSC schools (with Tiana)
  - Teamwork (Kelley, O'Neill)
  - Community service
  - Service learning
  - Professional development

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- Data Science Program  
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- Department of Computer Science
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(graduate program)
- Department of Intelligent Systems Engineering  
(Fall 2016)
- Data Science Program  
(graduate program)
- B.S. in Data Science, Fall 2020

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(graduate program)
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- B.S. in Data Science, Fall 2020
- B.S. in Cybersecurity and Global Policy, Fall 2020  
(Luddy + HLS partnership)

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- Department of Informatics
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(graduate program)
- Department of Intelligent Systems Engineering  
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- Data Science Program  
(graduate program)
- B.S. in Data Science, Fall 2020
- B.S. in Cybersecurity and Global Policy, Fall 2020  
(Luddy + HLS partnership)
- B.S. in User Experience Design, in progress  
(Luddy + Eskenazi)

# Department of Computer Science

- Undergraduate Degrees
  - Bachelor of Science in Computer Science: 507 students  
(Specializations: AI, PL, Systems, Foundations, Security, Data Science, Software Engineering, Game Development specialization (in collaboration with the Media School))
  - Bachelor of Arts in Computer Science  
(Administered by the College of Arts and Science)
  - Accelerated Master's Program in Computer Science
  - Accelerated Master's Program in Secure Computing
  - Minor in Computer Science
  - Minor in Information Technology

- Graduate Degrees
  - M.S. in Computer Science
  - M.S. in Bioinformatics
  - M.S. in Secure Computing
  - Dual Degree in Secure Computing and the Russian and East European Studies
  - M.S. in Cybersecurity Risk Management (jointly with Maurer and Kelley)
  - Ph.D. in Computer Science
  - Ph.D. in Cognitive Science and Computer Science  
(A dual major in cognitive science and computer science)
  - Ph.D. Minor in Computer Science

- Undergraduate Degrees
  - Bachelor of Science in Informatics: 1275 students  
(Cognates in 30+ areas)
  - B.S. Informatics → MSIS (Kelley School of Business)
  - B.S. Informatics → MIS (ILS)
  - Certificate in Informatics
  - Minor in Human-Centered Computing
  - Minor in Informatics
  - Minor in Security Informatics



- Graduate Degrees

- M.S. in Informatics

- (Complex systems, proactive health informatics, human-computer interaction design, music informatics, intelligent and interactive systems, computing, culture and society, and virtual heritage)

- M.S. in Human-Computer Interaction Design

- Ph.D. in Informatics

- (Multiple tracks)

- Ph.D. Minors in Informatics

- (Bioinformatics, complex networks and systems, data science, human-computer interaction, informatics, music informatics, security informatics, and social informatics)

# Information and Library Science

- Minor in Intelligence Studies
- Master of Information Science (M.I.S.)
- Accelerated Master's Program in Information Science (B.S. or B.A. and a Master of Information Science)
- Master of Library Science (M.L.S.)
- Accelerated Master's Program in Library Science (B.S. or B.A. and a Master of Library Science)
- Ph.D. in Information Science
- Ph.D. minors: ILS, Information Science
- Graduate Certificate in Information Architecture

- Undergraduate Degrees
  - Bachelor of Science in Intelligent Systems Engineering: 111 students (Concentrations: Computer Engineering/Cyber-physical Systems, Bioengineering, Molecular Nanoscale Engineering)
  - Accelerated Master of Science in Intelligent Systems Engineering

- Graduate Degrees
  - Master of Science in Intelligent Systems Engineering
  - PhD in Intelligent Systems Engineering  
(Tracks : Bioengineering, Computer Engineering, Cyber-physical Systems, Environmental Engineering, Molecular and Nanoscale Engineering, Neuroengineering)

- Data Science GR CRT
- Data Science MS
- Data Science MS Online

# Graduate Certificates

- Data Science GR CRT
- Cybersecurity GR CRT
- Information Architecture GR CRT

# Major Undergraduate Initiatives

- Direct Admission
- Living-Learning Center
- International Experience
- Undergraduate Research
- Diversity
- Computing Education Outreach

## Direct Admission by the Numbers (Info and CS)

<b>Year</b>	<b>Total admits</b>	<b>Direct Admits</b>	<b>Direct/Total</b>
2013	212	30	14%
2014	231	52	23%
2015	282	88	31%
2016	280	101	36%
2017	278	98	35%
2018	326	117	36%



## Direct Admission by the Numbers (ISE)

<b>Year</b>	<b>Total admits</b>	<b>Direct Admits</b>	<b>Direct/Total</b>
2016	36	25	70%
2017	35	27	77%
2018	63	53	84%

# Living-Learning Center

- Student Engagement and Success
- Teter Hall, 5th floor, 54 students, co-ed
- Direct admit, premajors, and returning higher level students
- Started in Fall 2017
- Two floors in 2020!

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  - 4 University of Edinburgh, School of Informatics

# IE cont'd

- Short-term plans

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- International Serve/Teach-IT (Belize: 2015, 2018)

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- Setting bigger goals:
  - 1 Competitions: e.g. ACM's Student Research Competition, ...
  - 2 Publications: IU Journal of Undergraduate Research, ...
  - 3 Senior Thesis Award

# Diversity

- Three times NCWIT Pacesetter Team!
- Collaborative plans with Hudson & Holland Scholars Programs and Groups Scholars Program
- Various programming for women and URM in computing



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  - 5 Indiana is one of the 28 states in US with K-12 CS standards.
  - 6 4,511 open computing jobs (2.6 times the state average demand rate), approx. \$340M opportunity.