



JACOBS UNIVERSITY

Hendro Wicaksono

Professor of Industrial Engineering

h.wicaksono@jacobs-university.de





1,557

STUDENTS



FOUNDED IN **2001**



199

RESEARCHERS AND
LECTURERS



66

PROFESSORS



120 + NATIONALITIES



5

COLLEGES ON CAMPUS



THE WORLD UNIVERSITY RANKINGS 2019 TOP 30 YOUNG

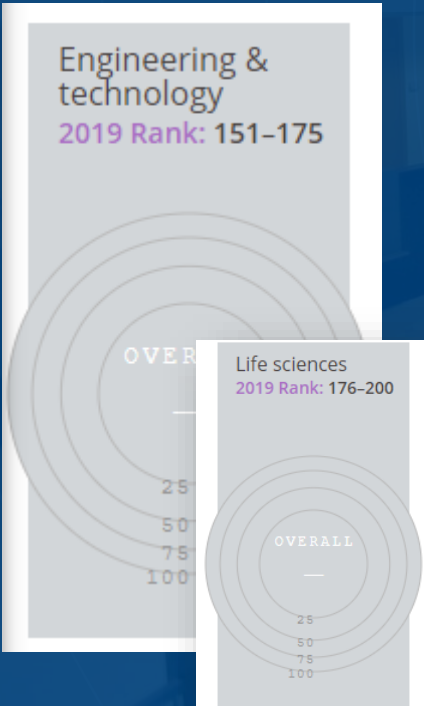
WE ARE **#5 IN GERMANY**
#26 WORLDWIDE



BEST SMALL UNIVERSITY!

#1 IN GERMANY
#10 WORLDWIDE

THE WORLD UNIVERSITY RANKINGS 2019 TOP 10 SMALL



Best small university rank 2019	Best small university rank 2018	World University rank 2019	University	Country/region	Number of students
1	1	5	California Institute of Technology	United States	2.255
2	2	108	École Polytechnique	France	2.908
3	NR	142	Pohang University of Science and Technology (POSTECH)	South Korea	3.238
4	3	=153	Sant' Anna School of Advanced Studies - Pisa	Italy	737
5	NR	=161	Scuola Normale Superiore di Pisa	Italy	539
6	4	201-250	University of Luxembourg	Luxembourg	4.969
7	5	201-250	École Normale Supérieure di Pisa	France	2.207
8	NR	201-250	Ulsan National Institute of Science and Technology (UNIST)	South Korea	4.255
9	NR	201-250	École des Ponts ParisTech	France	1.943
10	NR	201-250	Jacobs University	Germany	1.114*

*Only BA, BSc, MSc



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PRODUCTIVITY AND CITATION IMPACT OF FACULTY MEMBERS

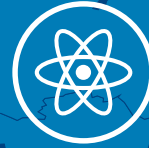
Diversity 11.31
Health 27.15
Mobility 12



PUBLICATIONS

PUBLICATIONS IN TOP 10% JOURNALS 2016-19

Diversity 42.4%
Health 54.9%
Mobility 28.8%
Jacobs University \emptyset 42%



THIRD-PARTY FUNDS/SCIENTIST 2018
€ 186,800



COLLABORATIONS

PUBLICATIONS WITH INTERNATIONAL COLLABORATORS 2016-19

Diversity 52.1%
Health 61.8%
Mobility 60.7%
Jacobs University \emptyset 61.6%



RECENT CONFERENCES

ON CAMPUS

7th International Conference on Systems Biology of Mammalian Cells SBMC 2108
July 2018, 2 days
DFG Workshop Biologisches Altern aus der Perspektive der Physik
July 2018, 4 days
BIGSSS Summer Schools in Computational Science 2018
July & August 2018, 14 days
Auto Digital
October 2018, 1 day
IEEE Workshop on Positioning, Navigation and Communications (WPNC)
October 2018, 2 days
Symposium B³ Bildung beyond boundaries
November 2018, 1 day
5th International Conference on Cocoa, Coffee and Tea
June 2019, 3 days

TOP RESEARCH

Outstanding knowledge production

WHERE DO JACOBS STUDENTS COME FROM?



CENTRAL AND SOUTH AMERICA



NORTH AMERICA



AFRICA



EASTERN EUROPE



CENTRAL AND WESTERN EUROPE
(THEREOF 21% FROM GERMANY)



ASIA
(INCL. MIDDLE EAST 3%)



JACOBS UNIVERSITY
COOPERATES WITH

106

UNIVERSITIES
IN DIFFERENT RESEARCH
PROJECTS

MORE THAN

70

UNIVERSITIES
ARE LOCATED IN
EUROPE

RESEARCH COOPERATIONS



55 PARTNER
UNIVERSITIES

USA

FLORIDA
Rollins College Winter Park
University of Miami Coral Gables

INDIANA
University of Notre Dame Notre Dame

MASSACHUSETTS
Wellesley College Wellesley

MISSOURI
University of Missouri Columbia
Westminster College Fulton

MINNESOTA
Augsburg College Minneapolis

NEW YORK
New York University New York City
Vassar College Poughkeepsie

OHIO
Denison University Granville
Case Western Reserve University Cleveland

PENNSYLVANIA
Carnegie Mellon University Pittsburgh
Lafayette College Easton
Drexel University Philadelphia
Villanova University Villanova
Swarthmore College Swarthmore

TEXAS
Rice University Houston
Texas Tech University Lubbock

WASHINGTON
Washington State University Pullman

ARGENTINA
Universidad de San Andres Buenos Aires

SCOTLAND

University of Aberdeen Aberdeen
University of Edinburgh Edinburgh

NORWAY

University of Oslo Oslo
University of Agder Kristiansand, Grimstad

SWEDEN

Uppsala University Uppsala

THE NETHERLANDS

Amsterdam University College Amsterdam
University of Groningen Groningen
University College Utrecht Utrecht

POLAND

Gdansk University of Technology Gdansk

SOUTH AFRICA

University of Johannesburg Johannesburg

SPAIN

Instituto de Empresa Madrid

FRANCE

Sciences Po Paris

ITALY

University of Cagliari Cagliari
University of Macerata Macerata

TURKEY

Kadir Has University Istanbul

ISRAEL

Interdisciplinary Center Herzliya Herzliya
Technion – Israel Institute of Technology Haifa
The Hebrew University of Jerusalem Jerusalem
The University of Haifa Haifa

RUSSIA

St. Petersburg State University
Saint Petersburg

CHINA

Capital Normal University Beijing
Fudan University Shanghai
University of Nottingham Ningbo Ningbo
Zhejiang Wanli University Ningbo

THAILAND

Thammasat University Bangkok

REPUBLIC OF KOREA

Underwood International College Seoul
Ulsan National Institute of Science and
Technology Ulsan

JAPAN

iCLA of Yamanashi Gakuin University Kofu
Ritsumeikan University Kyoto

UNIVERSITY PARTNERS AROUND THE WORLD

Joint degree, visiting, exchange,
and Erasmus partners



PRE-DEGREE PROGRAMS

- Foundation Year

MOBILITY

Undergraduate Programs

- Computer Science (BSc)
- Electrical and Computer Engineering (BSc)
- Robotics and Intelligent Systems (BSc)
- Industrial Engineering and Management (BSc)
- Mathematics (BSc)

Graduate Master Programs

- Supply Chain Management (MSc)
- Data Engineering (MSc)

HEALTH

Undergraduate Programs

- Biochemistry and Cell Biology (BSc)
- Chemistry (BSc)
- Earth and Environmental Sciences (BSc)
- Medicinal Chemistry and Chemical Biology (BSc)
- Physics (BSc)

Graduate Master Programs

DIVERSITY

Undergraduate Programs

- Global Economics and Management (BA)
- Society, Media and Politics (BA)
- International Business Administration (BA)
- International Relations: Politics and History (BA)
- Integrated Social and Cognitive Psychology (BSc)

Graduate Master Programs

- International Relations (MA)
- Psychologie (MSc, bilingual)

STUDY PROGRAM PORTFOLIO

Pre-degree,
Undergraduate, &
Graduate



Year I: **CHOICE**

Choose the major
after the first
year of study!

Year II: **CORE**

Study the CORE
elements of major
and a minor (if
applicable)!

Year III: **CAREER**

Enhance the
CAREER skills and
prepare for the job
market!

Potensi Konsep
KAMPUS MERDEKA

CURRICULUM: BACHELOR PROGRAMS

- Broad range of disciplinary and interdisciplinary courses.
- Students select three CHOICE modules from a variety of study programs.
- The combination of CHOICE modules is flexible.
- Students take three in-depth discipline-specific CORE modules.
- One CORE module can also be taken from a second, complementary discipline.
- This offers students a minor study track.

- Three month full term internship or 'start-up' support as part of curriculum
- 5th Semester designed to facilitate study abroad
- Specialization courses within respective study programs
- Project/research module (Bachelor thesis)

BA/BSc Degree at Jacobs University (180 CP)

Year 3	Bachelor Thesis / Seminar (m, 15 CP)			Big Questions (me, 5 CP)	Big Questions (me, 2.5 CP)
	Study Abroad Option (22.5 CP)			Community Impact Project (m, 5 CP)	Big Questions (me, 2.5 CP)
	Specialization (me, 3 x 5 CP)				
Internship/Startup (Summer) (15 CP)					
Year 2	CORE (me, 7.5 CP)	CORE (me, 7.5 CP)	CORE* (me, 7.5 CP)	Methods/Skills (me, 5 CP)	Language (me, 2.5 CP)
	CORE (me, 7.5 CP)	CORE (me, 7.5 CP)	CORE* (me, 7.5 CP)	Methods/Skills (me, 5 CP)	Language (me, 2.5 CP)
Year 1	CHOICE (m, 7.5 CP)	CHOICE (m, 7.5 CP)	CHOICE* Own Selection (me, 7.5 CP)	Methods/Skills (me, 5 CP)	Language (me, 2.5 CP)
	CHOICE (m, 7.5 CP)	CHOICE (m, 7.5 CP)	CHOICE* Own Selection (me, 7.5 CP)	Methods/Skills (me, 5 CP)	Language (me, 2.5 CP)
Area	CHOICE / CORE 90 CP			JACOBS TRACK 45 CP	

Minor Option* 30 CP

*To pursue a minor students select two choice modules of the subject they desire to obtain a minor in and pass at least 15 ECTS credits from advanced level modules of the minor (typically CORE) that are not used as mandatory modules in the graduation requirements of their major. Prerequisites for these advanced level modules must be met.



STUDENT TO TEACHER RATIO 16:1



Additional Courses

- 'Big Question' courses address global challenges through an interdisciplinary approach
- Career training
- German courses at all levels
 - Syllabi developed in accordance with Goethe Institute's requirements
 - A1.1 course for absolute beginners also available in Spring Semester
- Language courses by renowned language & culture institutes
 - Spanish with the Instituto Cervantes
 - French with the Institut Francais
 - Chinese with the Confucius Institute





INTEGRATION INTO GERMANY: **HOST FAMILY PROGRAM**

- The German host family program is available to incoming exchange and visiting students
- Events on campus for both host families and students



INTEGRATION INTO GERMANY: INTERCULTURAL TRAINING

Special training is provided to students to prepare them for Germany. Run over 2 full days, it covers:

- 'Fokus in Deutschland: Effective Intercultural Communication Strategies for Exchange Students in Germany'
- 'Can you be happier abroad? The tools of positive psychology'



CAMPUS SERVICES

- Guaranteed housing: single rooms, 24h security, resident mentors, and college office teams
- Diverse sports & arts facilities
- Student Clubs: Amnesty International, Debating Society, Model United Nations etc.
- Campus wide sports tournaments – football, cheerleading, basketball, etc.
- Campus life: country information days, musical concerts, art competitions, etc.
- Recreational and multimedia facilities
- Peer student advising





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COMMUNITY COOPERATIONS

- Gastfamilien Programm
- Refugee Center
- Kita Ebenroder Straße
- Epsymo
- Oberschule Vegesack
- Student Service Center
- Explore Bremen
- Martinshof
- Bremer Heimstiftung
- Vegesack Marketing
- Stiftung Friedehorst
- Gerhard Rohlf's Oberschule
- Children Jugend hilft
- DRK

15+

BIG EVENTS

FOR OUR NEIGHBORHOOD

- Art Fest
- Blood Drive - Blood Donation Event BRIMUN
- Model United Nations
- Charity Week
- CID (Country Information Day): Bulgaria, Romania, Georgia, South Korea, USA, COSA - Colors of South Asia
- DanceStoned - Dance Performances
- Diwali - Hindu Festival
- Jacobs Way - Musical
- J-Cappella Concerts
- Lunar New Year - Asian Fest
- Oriental Dance Show
- Piano to Forte - Concert
- Spotlight - Talent show
- TEDx
- and many more performances with dancing, singing, acting, and playing

BREMEN

10

CULTURAL COOPERATIONS

- Statt Theater Vegesack
- Kulturbüro Bremen Nord
- Theater Bremen
- Vegesacker Seemannschor
- Hochschule für Künste
- Deutsche Kammerphilharmonie
- Universität Bremen
- Freie Waldorfschule Bremen-Nord
- Blindengarten Bremen e.V.
- Vegesack Marketing e.V.

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SPORTS COOPERATIONS

- Kreissportbund Bremen Nord KSB
- Vegesacker Ruderverein VRV
- Landesruderverband Bremen
- Sportverein Aumund Vegesack SAV
- SV Grohn
- Swimming Pool Partnership
- Nebelthau-Gymnasium
- Ritterhude Badgers

INTEGRAL PART OF BREMEN

**ABOUT RESEARCH GROUP INTELLIGENT DATA MANAGEMENT IN
INDUSTRY 4.0 (INDEED)**

ABOUT THE RESEARCH GROUP/CHAIR

INDEED – INTELLIGENT DATA MANAGEMENT IN INDUSTRY 4.0 (2018-2020)



Hendro



Andrea-Pin



Linda



Bai



Sharath



Bianca



Sebastian



Diana



Methods and tools

- Data integration through linked data
- Big data analytics, machine learning
- Knowledge representation, ontologies
- Human centered technologies (AR, VR,MR)
- Innovation, technology, and knowledge management

Applications

- Smart Cities
- Supply Chain 4.0
- Construction 4.0
- Agriculture 4.0



Katharina



Milos



Obed



Saurav



Azka



Hassan



Paola



Josslyn



STUDENTS @INDEED



Andrea-Pin



Burulai



Paolo



Hamza



Peter-Sleiman



Hillel



Leo



Helen



Daniyar



Yousuf



Kate



Surendra



Nara



Zayed



Natnael



Andrea-Pin Morales



DAAD Prize 2019
IEM Student of the Year 2020



Peter-Sleiman Mansour



Faculty Recognition Award 2020



Kateryna Taran



Faculty Recognition Award 2020

PROF. DR.-ING. HENDRO WICAKSONO

School Education (SD-SMA) in Sidoarjo, East Java

Education:

ITB Bandung (Bachelor, Teknik Informatika);
Universität Karlsruhe (M.Sc., Information and Communication Engineering)
Karlsruher Institut für Technologie (Dr.-Ing., Mechanical Engineering)

Academic Experiences:

- **Professor of Industrial Engineering, Head of Research Group INDEED (Intelligent Data Management in Industry 4.0):** Jacobs University Bremen (2018 - now)
- **Visiting Professor/ Lecturer:** TU Sofia (Bulgaria), MPEI Moscow (Russia), UNAIR, ITS, Universitas Nahdlatul Ulama Surabaya (UNUSA), UIN Yogyakarta, UIN Malang, UM Malang, Unisma Malang

Professional Experiences:

- **Board of Commissioners and Advisor of Digital Start-Ups:** Green Indonesia (Sustainability), Genolife Teknologi Nusantara (Healthcare) (2018-now)
- **Consulting/ Guest Expert:** Kühne+Nagel (Switzerland), Kemenperin (Indonesia),
- **IT Consultant:** EDS Itellium an Hewlett-Packard Company, (2006-2009)

Other Professional Activities:

- **Expert Panel:** Research Foundation Flanders (Belgium), European Materials Modelling Council
- **Organizations and Collaborations:** Research Cluster LogDynamics, Bundesverein Logistik (BVL), W3C, Ikatan Ahli Sarjana Indonesia (IASI)
- **Advisor** IndoHub start-up community Berlin, Masyarakat Ekonomi Syariah (MES) Jerman

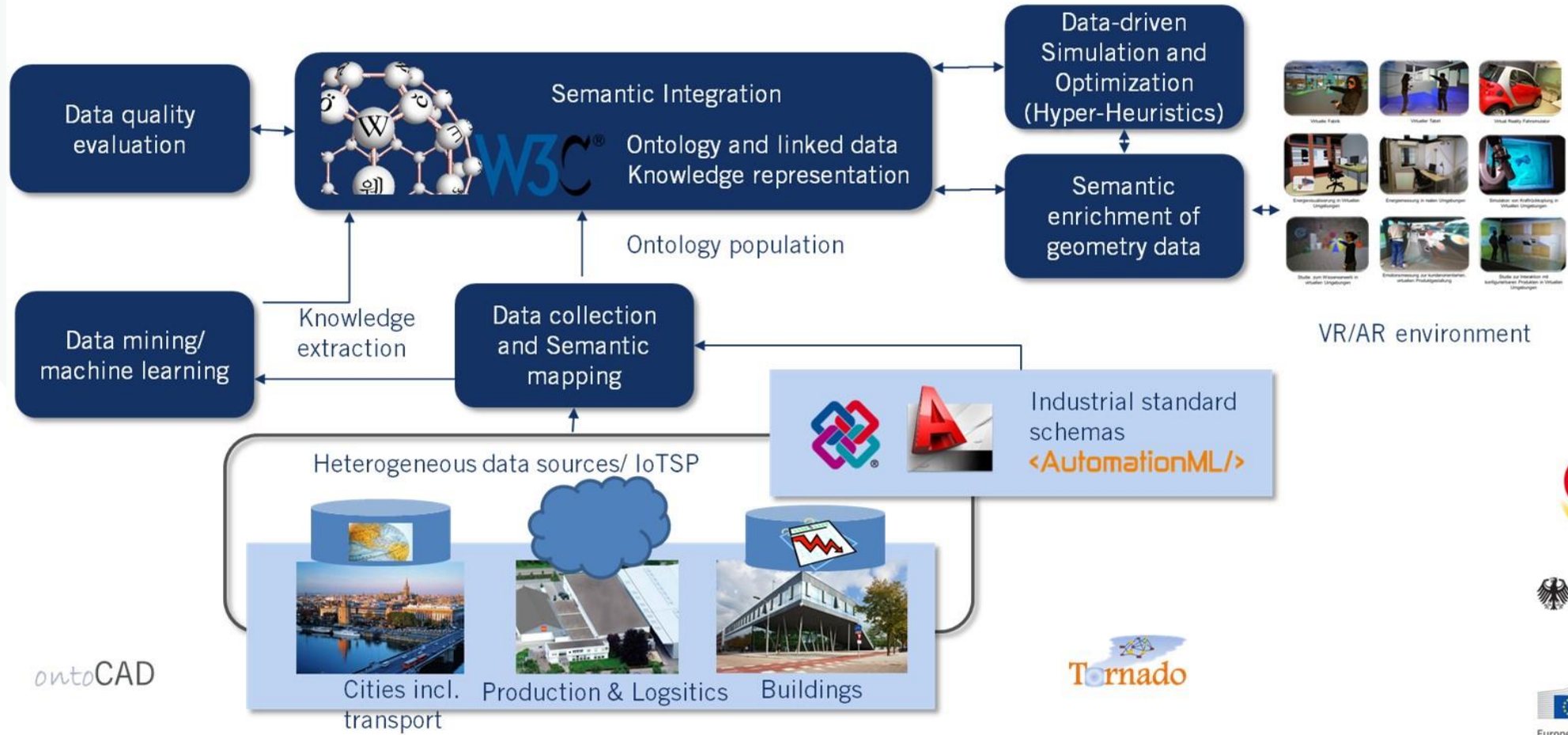
Social-Cultural Activities:

- PCI NU Jerman
- German-Speaking Muslim Community Karlsruhe (DMK)





CORE METHODOLOGY



ontoCAD



ecobalance

wEn Pro

KnoholEM

Tornado

SWIMing



Bundesministerium für Bildung und Forschung



Horizon 2020 European Union funding for Research & Innovation

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH



OTHER TOPICS

- **Sustainability**

- ESG Intelligence
- Green scepticism
- Circular economy

- **Industry 4.0**

- Maturity Index
- Construction 4.0
- Agriculture and Aquaculture 4.0
- Health 4.0
- Logistics and Supply Chain Analytics
- Data platform industry 4.0

- **Smart Cities**

- Smart energy services
- Integrated digital services

- **Innovation and technology management**

- Digital ecosystem and business model
- Disruptive innovation



THANK YOU

PROF. DR.-ING. HENDRO WICAKSONO

H.WICAKSONO@JACOBS-UNIVERSITY.DE

JACOBS UNIVERSITY BREMEN GGMBH, CAMPUS RING 1 28759 BREMEN

+49 421 200 4375