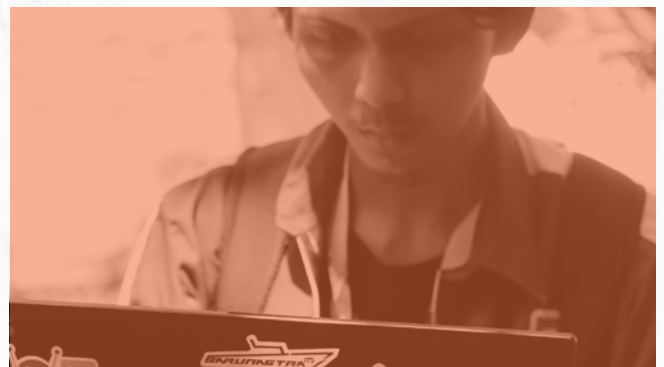




COMMUNITY & OUTREACH

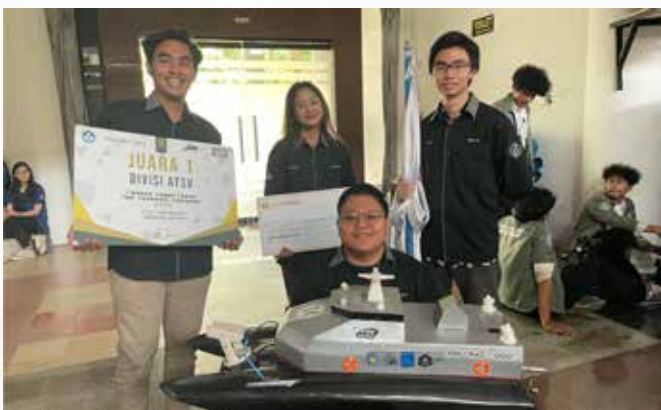


“BARUNAstra ON INI LHO ITS 2024!



Surabaya, January 2024 – The Barunastra ITS Team showcased their robotics expertise at INI LHO ITS 2024!, an annual event introducing Institut Teknologi Sepuluh Nopember (ITS) to the community. As one of ITS's flagship research teams, Barunastra highlighted their achievements in autonomous surface robots through an engaging exhibition. Visitors explored award-winning robot designs, gaining insight into the engineering and testing processes, which inspired prospective students and young innovators.

The Barunastra booth also emphasized ITS's innovative research environment. Enthusiastic team members shared practical applications of ocean engineering and robotics, fostering interest among attendees, especially high school students. The event underlined ITS's commitment to nurturing future engineers and promoting groundbreaking technological advancements.



TECHNOCRAFT PLAYHOUSE: HANDS-ON BOAT-BUILDING WORKSHOP

As part of the event, Barunastra ITS hosted a workshop titled **Technocraft Playhouse**, offering students a hands-on introduction to engineering by designing and building functional model boats. Guided by Barunastra team members, participants explored key concepts like buoyancy, propulsion, and stability, applying them creatively in constructing their mini-boats.

The workshop was met with enthusiasm as students proudly showcased their creations. The interactive experience sparked interest in marine engineering and robotics, with many participants expressing excitement about pursuing these fields in the future.



// Over
1500+ Student
Attend //

BARUNASTRA ITS SHOWCASES MARITIME INNOVATION AT COMMTECH 2024 ✨

Surabaya, January 2024 – Barunastra ITS, proudly showcased their latest maritime innovations at CommTECH 2024 (Community and Technological Camp), a prestigious international event that brought together students from Thailand, China, Vietnam, the Philippines, Canada, Malaysia, Taiwan, South Korea, and Myanmar. The event was a testament to the spirit of collaboration and exchange of ideas across cultures and disciplines.

The event was attended by students and professionals from ten countries, providing a platform for meaningful exchanges. During the Q&A session, participants were eager to learn about the development process, technical specifications, and future improvements of Barunastra's USV. Meanwhile, a participant from Vietnam expressed interest in potential collaborations, emphasizing the shared challenges faced by maritime nations.

BARUNASTRA ITS TEAM WELCOMES AND INSPIRES NATION STAR ACADEMY STUDENTS WITH ROBOTICS INNOVATIONS 🌸

Surabaya, February 2024 – The Barunastra Team once again demonstrated their dedication to inspiring young generations through technology education. This time, they had the opportunity to welcome and share their knowledge with students

from Nation Star Academy in an engaging presentation focusing on marine robotics innovations.

The event was filled with excitement as Barunastra team members introduced advanced technologies they have developed, including their Unmanned Surface Vehicle (USV), a maritime robot that has brought ITS international recognition in various competitions.

The event also featured a lively Q&A session, where Nation Star Academy students expressed their curiosity about the practical applications of marine robotics. Some students posed critical questions, such as how the technology could assist fishermen or prevent ocean pollution.



GRAND LAUNCHING NALA PROTEUS 2.0



This year, the Barunastra ITS team will compete in the International Roboat Competition in Florida, USA, organized by RoboNation. Over four months, the team developed the NALA PROTEUS 2.0 vessel, equipped with advanced modular technology and optimized design to tackle eight complex challenges, including navigation, obstacle avoidance, docking, target aiming, and object detection.

Showcasing innovation and high performance, NALA PROTEUS 2.0 represents a leap forward in maritime technology, embodying the team's determination to reclaim their title as world champions.

The grand launching for PROTEUS 2.0 was held in rectorate ITS on January 26th, 2024. Our vessel was inaugurated directly by the Rector of Institut Teknologi Sepuluh Nopember (ITS), Mochamad Ashari. He said "This is one of the best works of ITS students to participate in developing maritime technology". This event was attended by the rectorate officials, our sponsor companies, other research teams from ITS, and more than ten national media publications.



We, Barunastra ITS team, have a target to bring back the world champion in this competition and always actively contribute to developing technologies for the maritime industry.



OUTPERFORMING TOP WORLD-CLASS CAMPUSES, BARUNASTRA ITS PREVAILS ONCE AGAIN IN AMERICA!



The Barunastra ITS team achieved an impressive third place in the Autonomy Challenge category at the International Roboboat Competition (IRC) 2024, held in Florida, USA. Competing against 16 prestigious universities, including Georgia Institute of Technology and Cornell University, the team showcased their cutting-edge robotic boat, Nala Proteus 2.0, which completed multiple complex missions such as navigation, speed challenge, and delivery octagon. General Manager I Made Vibra Dananjaya credited the boat's success to innovative features like its crane system, enabling precise execution of tasks and achieving perfect scores in several rounds.

Despite this remarkable achievement, the Barunastra ITS team remains committed to further innovation and development. With plans to enhance the capabilities of Nala Proteus 2.0, they aim to raise their competitive edge in future international events.

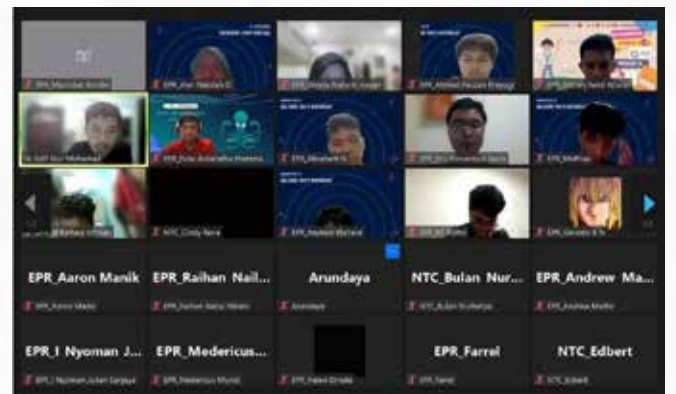


// We hope the Barunastra ITS team can continue to grow and reach new heights every year," Vibra expressed, reflecting the team's dedication to pushing the boundaries of marine robotics //

FEATURED ON KOMPAS TV JATIM!

- **Programming Division:** Interns in this division will delve into coding for autonomous navigation and sensor integration, honing their skills in software development and algorithm optimization.
- **Electrical Division:** Participants will explore the intricate workings of power systems, circuit design, and electronic components crucial for the functionality of Barunastra's unmanned surface vehicles.
- **Mechanical Division:** Interns will gain hands-on experience in designing and fabricating structural components, ensuring the boats are robust and hydrodynamic.

- Through the Nala 13 Internship Program, Barunastara ITS aims to inspire and empower young talents to innovate and contribute to advancing marine technology while strengthening its legacy as a world-class robotics team.



WELCOMING NALA 13

Barunastra ITS proudly announced the completion of its Nala 13 Internship Program, marking the beginning of an exciting journey for the selected interns who will now join the team. The internship program, which spanned several months, provided participants with hands-on experience in Programming, Electrical, Mechanical, and Non-Technical divisions, preparing them to contribute to the development of innovative marine robotics technology.



Davin Abhinaya Briet || Dionisius Vito Aubin || Sigmayuriza Senaaji Rasendria || Dipta Mulya Suryono || Batara Haryo Yudanto || Medericus Mundi Miseridityo || Winda Nafiqih Irawan || Jilan Nabilah Dikairono || Farrel Rahmadany Akbar || Terrania Rafva Nareswari || Sheany Angela Diaz Wijaya || Nathan Pascalauren Koroy || Zahrina Nur Amalina Syamsudin || Rifa Humaira Putri || Athalla Barka Fadhil

After rigorous training and assessments, the chosen interns have demonstrated exceptional skills, dedication, and a passion for innovation. These new members will now work alongside the core team, contributing to ongoing projects, including the next iteration of the Autonomous Ship. As they embark on this new chapter, the Barunastra ITS team is confident that these young talents will uphold the team's legacy of excellence and innovation in global competitions and beyond.

SPREADING KINDNESS THROUGH BARUNASTRA BERBAGI

Following the welcoming ceremony, the team turned their focus to spreading joy through Barunastra Berbagi, an initiative to share food packages. The activity, held during the holy month of Ramadan, reflected Barunastra ITS's values of compassion and social responsibility. Team members came together to distribute meals, embodying the spirit of giving and solidarity.

BARUNASTRA ITS, REPRESENTING INDONESIA IN THE INTERNATIONAL MARITIME CONGRESS IN RUSSIA



Presenting the theme of USV Development, Barunastra ITS represented Indonesia in the world's largest international maritime congress, NEVA Maritime Congress which was held in a hybrid manner in the city of Vladivostok, on May 31, 2024. In front of more than 1,200 international participants and renowned maritime experts, Barunastra ITS explained about ASV innovation and its potential in advancing the Indonesian

maritime industry and explained about the development of ASV research in Indonesia, including Barunastra ITS's contribution in this field. Participation in the 2024 NEVA Maritime Congress is a valuable opportunity for Barunastra ITS to learn from experts and collaborate with stakeholders in the maritime sector from various countries. It is hoped that with this, Barunastra ITS can open up opportunities for Indonesia and the Sepuluh Nopember Institute of Technology on the international stage.



BARUNASTRA AND SPEKTRONICS ITS TEAMS COLLABORATE TO INSPIRE STUDENTS AT

SMA MUHAMMADIYAH 10 SURABAYA

In a joint effort to empower and inspire the next generation of innovators, the **Barunastra ITS** and **Spektronics ITS** teams conducted a social project at **SMA Muhammadiyah 10 Surabaya**. The initiative combined expertise from both teams, showcasing cutting-edge advancements in marine robotics and chemical engineering to high school students eager to explore the possibilities of science and technology.



Barunastra ITS showcased their award-winning unmanned surface vehicle, while the Spektronics team demonstrated a chemical reaction-powered car, highlighting innovative approaches to energy-efficient transportation. Through interactive presentations, hands-on activities, and Q&A sessions, the event inspired students with insights into engineering, teamwork, and problem-solving, reflecting ITS's commitment to nurturing young talent and fostering innovation.

JOINT WORKING GROUP



The prestigious Indonesia-France Joint Working Group (JWG) 2024, hosted at Graha UNESA, Surabaya on July 2-5, gathered leading research teams and technology experts from both nations. At this landmark collaboration, Barunastra ITS, a pioneering maritime robotics research team, demonstrated their latest autonomous vessel technology through Proteus 2.0. The research showcase also featured ITS's healthcare innovation RAISA, exemplifying the institution's diverse technological research capabilities. This strategic international partnership not only advanced Indonesia-France research collaboration but also highlighted Barunastra ITS's excellence in maritime robotics research and development on the global stage.



BARUNASTRA ITS SHOWCASES MARITIME INNOVATION AT 12TH INAMARINE EXHIBITION

For the third consecutive year, Barunastra ITS participated in the prestigious 12th INAMARINE Exhibition, one of Asia's leading maritime events. The team proudly showcased their latest innovation, the Nala Proteus 0.2 autonomous ship, designed for ocean clean-up missions. This advanced vessel, equipped with sophisticated systems, has already garnered recognition and success, including winning the International Roboboat Competition (IRC) earlier this year.



General Manager I Made Vibra Dananjaya highlighted that Barunastra's participation in INAMARINE is a significant opportunity to strengthen ties with the maritime industry.

General Manager I Made Vibra Dananjaya highlighted that Barunastra's participation in INAMARINE is a significant opportunity to strengthen ties with the maritime industry. "As the only student research team at this exhibition, it's an honor to present our work and innovations alongside global maritime leaders," Vibra said. Visitors, including professionals from maritime companies and government officials, showed great enthusiasm for the capabilities of Nala Proteus 0.2, with Eko Sudarmanto, Head of the Voyage Safety Technology Center, even taking the time to visit Barunastra's booth.

Vibra expressed gratitude for the positive feedback and support, stating that such exposure helps increase the visibility of ITS and its contributions to maritime technology.

"We hope this event will open up new opportunities for ITS to engage in maritime industry projects and foster long-term collaborations,"

- Vibra Dananjaya

As Barunastra continues to innovate, the team is excited about the future potential to contribute to the growth of the global maritime industry.

INTERNATIONAL ROBOTIC SYMPOSIUM

Advancing Industry 4.0: Barunastra ITS at the Forefront of Robotics Innovation

The International Robotic Symposium 2024, a prestigious event organized by the Indonesia Robotic Association in collaboration with RoReC Singapore and RoReC Indonesia, showcased Barunastra ITS's engagement in Indonesia's Industry 4.0 transformation from July 15-17, 2024. Hosted by the Pusat Industri Digital 4.0 (PIDI 4.0), a strategic government institution under the Ministry of Industry's Industrial Human Resources Development Agency, this influential gathering brought together key stakeholders including policymakers, industry practitioners, and technology developers.



During the symposium, Barunastra ITS engaged in productive discussions with notable figures such as Elwin Ardirianto, CEO of Nirmana Kinetik and ITS alumnus, and Zen Samsono Hadi from PENS regarding TaniPintar project implementations. The team also explored cutting-edge technologies presented by various exhibitors, including advanced SaaS solutions for machine learning and generative AI, establishing valuable connections that strengthen their position within Indonesia's robotics ecosystem while advancing their maritime robotics innovations.



OKKBK ROADSHOW 2024 ✨

Get ready to sail with us!

In August 2024, Barunastra ITS enthusiastically participated in the OKKBK Roadshow, an annual event aimed at introducing the academic journey of new students. Our team was honored to present in four departments: Marine Engineering, Computer Engineering, Physics, and Materials and Metallurgical Engineering. Through interactive sessions and inspiring stories, we sparked curiosity and encouraged more than 400 students to embrace innovation in engineering. This activity highlighted our dedication to nurturing future engineers while showcasing Barunastra's vision for cutting-edge maritime technology.



GERIGI ITS 2024 🌸

Welcome new students!

Barunastra ITS participated in GERIGI ITS 2024, an event designed to welcome new ITS students. One of the series of events in Gerigi ITS 2024 is the Integralistic Parade. During the iconic Integralistic Parade, we proudly showcased Proteus 2.0, which is one of the proud prototypes of the Barunastra ITS team. Outside the parade, Barunastra captivated the audience with interesting sessions, which sparked curiosity and inspired new students through material presentation sessions to dive into the world of maritime technology.



UKM EXPO 2024

Student Organization Fair

The UKM Expo at Institut Teknologi Sepuluh Nopember provided a strategic platform for Barunastra ITS to connect with incoming students. As a distinguished research team under ITS Robotics, Barunastra showcased their expertise in autonomous vessel development, successfully engaging potential new members while highlighting their innovative contributions to maritime robotics research.





WELCOME PARTY & OPEN HOUSE ROBOTIKA

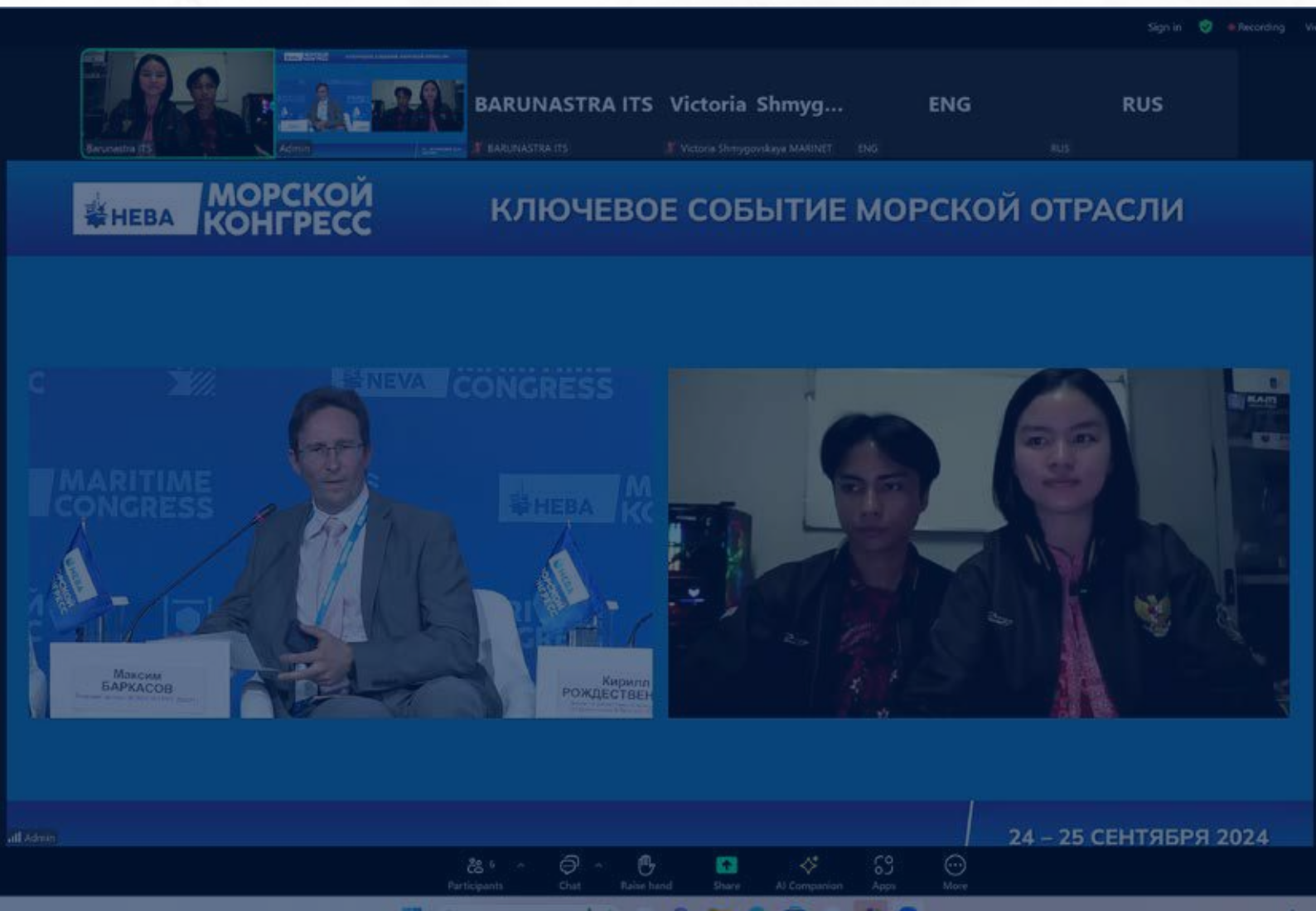
Your path to the robotics revolution begins here.

At the ITS Robotics Welcome Party & Open House, Barunastra ITS demonstrated their leadership in maritime robotics through an engaging exhibition booth and specialized training sessions. The team's contribution to fundamental robotics training showcased their dedication to nurturing new talent and strengthening the robotics research community at IT

NEVA MARITIME CONGRESS 2024

Barunastra ITS Gains International Recognition at NEVA Maritime Congress 2024

Barunastra ITS achieved international recognition at the prestigious NEVA Maritime Congress in Vladivostok on May 31, 2024. As the sole student representative among 1,200 international participants, the team presented "Advancing Autonomous Maritime Solutions: Insights from the BARUNASTRA ITS RoboBoat Team's USV Development In Indonesia." This landmark presentation alongside maritime experts from Harbin Engineering University, Nevelskoy Maritime State University, and Russian Maritime Register of Shipping positioned Barunastra ITS as a leading voice in autonomous maritime innovation. The hybrid congress facilitated valuable connections with Asia-Pacific maritime stakeholders, opening new opportunities for collaboration between Institut Teknologi Sepuluh Nopember and the global maritime industry.



MERCHANDISE SELL

Brand Enhancement Initiative



Barunastra ITS expanded its brand presence through a strategic merchandise campaign, offering carefully designed products that reflect the team's commitment to maritime innovation and technical excellence. The comprehensive merchandise collection featured everyday items including custom-designed stickers, distinctive key chains, versatile tote bags, branded caps, professional lanyards, and high-quality t-shirts - each item thoughtfully crafted to represent

Barunastra's identity through original designs created by the team. This carefully curated selection of everyday items enabled supporters to showcase their connection to Barunastra while using practical, well-designed merchandise. The initiative not only strengthened team identity but also enhanced visibility within the academic and research communities, as these carefully designed items served as tangible representations of Barunastra's creative prowess and attention to detail in all aspects of their operations.



KEYCHAIN

10k
per pcs



T-SHIRT

90k



BASEBALL CAP

40k



LANYARD

15k



STICKER PACK

10k



TOTEBAG

40k

BARUNASTRA MASTERCLASS



The first Barunastra Master Class was a significant turning point in the team's educational outreach. This comprehensive one-day workshop, held at the Menara Sains Tower 2 ITS, provided expert training in electrical systems, programming, and mechanical engineering, attracting potential members and demonstrating Barunastra's technical expertise in autonomous maritime systems.

The event was a huge success in terms of ticket sales, with all divisions achieving their goal audience capacity, proving the team's commitment to knowledge sharing and community participation. Menara Sains' strategic venue choice provided cutting-edge facilities, which improved the learning experience for all attendees also satisfies all participants.

During the time for registration, Barunastra launched a successful merchandise pre-order advertisement, featuring exclusively designed items such as T-shirts, hats, key chains, stickers, and tote bags, all featuring original artwork created by the Barunastra team, serving as effective branding tools while providing attendees with high-quality memorabilia. Barunastra Master-class has successfully built.



ICOMMET 2024

*Innovation Showcase at
ICOMMET 2024*

Barunastra ITS contributed to the Department of Materials and Metallurgical Engineering's anniversary celebration at ICOMMET 2024, held at Grand City Surabaya from October 12-14, 2024. The team's state-of-the-art Proteus 2.0 vessel drew significant attention during the interactive exhibition and talk show sessions, demonstrating the practical applications of maritime robotics technology.

ITS EXPO 2024

*Technological Innovation
Display at ITS EXPO*

At the Chronicle Expedition-themed ITS EXPO, Barunastra ITS showcased their contributions to ITS's technological advancement through engaging exhibition displays and grand show participation. The event successfully merged scientific innovation, cultural elements, and technological advancement, highlighting the team's role in ITS broader mission.





OPEN RECRUITMENT NALA 14

The journey begins; another phase will be revealed!

The NALA 14 Open Recruitment program exemplified Barunastra ITS's commitment to sustainable team development. This comprehensive selection process, comprising document screening, interviews, and an intensive internship period, ensures the team maintains its high standards of excellence while nurturing the next generation of maritime robotics innovators

INTERNALIZATION & INTRODUCING NEW CABINET ✨



The annual Internalization event held in Batu, Malang on November 16-17, 2024, improved team cohesion through targeted team-building activities. The election of the new General Manager and Division Coordinators was a major feature of the event, representing an important leadership shift for the business. This strategic gathering strengthened internal relationships and the collaborative spirit of Barunastra ITS members, ensuring the team's continued success in maritime

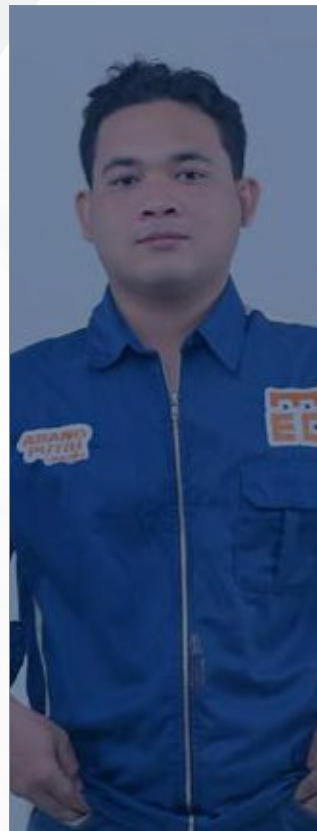
robotics innovation. The new management structure sets the team for more coordination and new insights in achieving its goals.



Taib Izzat Samawi
General Manager



Alifa Hikmawati
Coordinator of NTC



M. Fajri Romadlon
Coordinator of MEC



M. Andi Abdillah
Coordinator of EPR

